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RECEIVED
August 14, 2017
**Commission on
State Mandates**

August 14, 2017

VIA CSM DROPBOX

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

Re: City of Union City Response to Notice of Incomplete Test Claim
*California Regional Water Quality Control Board,
San Francisco Bay Region, Order No. R2-2015-0049*

Dear Ms. Halsey:

On behalf of the City of Union City, we are writing in response to your July 14, 2017, Notice of Incomplete Test Claim. Although the Notice indicates the City must address three issues in order to cure the test claim, after further discussion, the Commission agreed that the only item that must be addressed and revised is item (1) The dates cost were *first* incurred. Accordingly, Union City submits concurrently herewith a test claim package with a revised written narrative and declaration to identify the date costs were first incurred. The revisions that address this issue are specified below.

- Written Narrative, new Section VI, beginning on page 5.21;
- Declaration of Thomas Ruark, new paragraph 9(e), beginning on page 6.1.10; and,
- Declaration of Jim Scanlin, new paragraph 11, beginning on page 6.2.5.

Please do not hesitate to contact me if you have any questions or need additional information regarding this matter.

Sincerely,

Gregory J. Newmark
Attorney at Law

Encl.

DECLARATION OF SERVICE BY EMAIL

I, the undersigned, declare as follows:

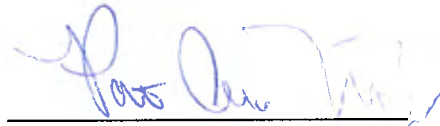
I am a resident of the County of Los Angeles and I am over the age of 18 years, and not a party to the within action. My place of employment is 707 Wilshire Boulevard, 24th Floor, Los Angeles, California 90017.

On August 14, 2017, I served the:

1. Alameda and San Mateo County Claimants and County of Santa Clara's letter regarding February 15, 2017 request for extension by RWQCB

by electronically filing it on the Commission's website, which provides notice of how to locate it to the email addresses provided on the test claim mailing list.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on August 14, 2017, at Los Angeles, California.



Patricia Anne McNulty

2847563.1

UNION CITY TEST CLAIM

IN RE

MUNICIPAL REGIONAL STORMWATER PERMIT ISSUED BY

THE CALIFORNIA REGIONAL WATER QUALITY CONTROL

BOARD,

SAN FRANCISCO BAY REGION

NPDES NO. CAS612008

ISSUED AS ORDER NO. R2-2015-0049 (NOVEMBER 19, 2015)

1. TEST CLAIM TITLE

Municipal Regional Stormwater Permit

2. CLAIMANT INFORMATION

City of Union City

Name of Local Agency or School District

Antonio E. Acosta

Claimant Contact

City Manager

Title

34009 Alvarado-Niles Road

Street Address

Union City, CA, 94587

City, State, Zip

(510) 675-5351

Telephone Number

Fax Number

tonya@unioncity.org

E-Mail Address

3. CLAIMANT REPRESENTATIVE INFORMATION

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

Gregory Newmark

Claimant Representative Name

Principal

Title

Meyers, Ave, Riback, Silver & Wilson

Organization

555 12th Street, Suite 1500

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For CSM Use Only

Filing Date:

RECEIVED

June 30, 2017

**Commission on
State Mandates**

Test Claim #: 16-TC-03

4. TEST CLAIM STATUTES OR EXECUTIVE ORDERS CITED

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

Municipal Regional Stormwater Permit No. CAS612008, issued by the Regional Water Quality Control Board, San Francisco Region as Order No. R2-2015-0049 on November 19, 2015, effective January 1, 2016.

Copies of all statutes and executive orders cited are attached.

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

5. Written Narrative: pages 7 to 33.

6. Declarations: pages 34 to 75.

7. Documentation: pages 76 to 837.

Sections 5, 6, and 7 should be answered on separate sheets of plain 8-1/2 x 11 paper. Each sheet should include the test claim name, the claimant, the section number, and heading at the top of each page.

5. WRITTEN NARRATIVE

Under the heading “5. Written Narrative,” please identify the specific sections of statutes or executive orders alleged to contain a mandate.

Include a statement that actual and/or estimated costs resulting from the alleged mandate exceeds one thousand dollars (\$1,000), and include all of the following elements for each statute or executive order alleged:

- (A) A detailed description of the new activities and costs that arise from the mandate.
- (B) A detailed description of existing activities and costs that are modified by the mandate.
- (C) The actual increased costs incurred by the claimant during the fiscal year for which the claim was filed to implement the alleged mandate.
- (D) The actual or estimated annual costs that will be incurred by the claimant to implement the alleged mandate during the fiscal year immediately following the fiscal year for which the claim was filed.
- (E) A statewide cost estimate of increased costs that all local agencies or school districts will incur to implement the alleged mandate during the fiscal year immediately following the fiscal year for which the claim was filed.
- (F) Identification of all of the following funding sources available for this program:
 - (i) Dedicated state funds
 - (ii) Dedicated federal funds
 - (iii) Other nonlocal agency funds
 - (iv) The local agency’s general purpose funds
 - (v) Fee authority to offset costs
- (G) Identification of prior mandate determinations made by the Board of Control or the Commission on State Mandates that may be related to the alleged mandate.
- (H) Identification of a legislatively determined mandate pursuant to Government Code section 17573 that is on the same statute or executive order.

6. DECLARATIONS

Under the heading “6. Declarations,” support the written narrative with declarations that:

- (A) declare actual or estimated increased costs that will be incurred by the claimant to implement the alleged mandate;
- (B) identify all local, state, or federal funds, and fee authority that may be used to offset the increased costs that will be incurred by the claimant to implement the alleged mandate, including direct and indirect costs;
- (C) describe new activities performed to implement specified provisions of the new statute or executive order alleged to impose a reimbursable state-mandated program (specific references shall be made to chapters, articles, sections, or page numbers alleged to impose a reimbursable state-mandated program);
- (D) If applicable, describe the period of reimbursement and payments received for full reimbursement of costs for a legislatively determined mandate pursuant to Section 17573, and the authority to file a test claim pursuant to paragraph (1) of Section 17574(c).
- (E) are signed under penalty of perjury, based on the declarant’s personal knowledge, information or belief, by persons who are authorized and competent to do so.

7. DOCUMENTATION

Under the heading “7. Documentation,” support the written narrative with copies of all of the following:

- (A) the test claim statute that includes the bill number alleged to impose or impact a mandate; and/or
- (B) the executive order, identified by its effective date, alleged to impose or impact a mandate; and
- (C) relevant portions of state constitutional provisions, federal statutes, and executive orders that may impact the alleged mandate; and
- (D) administrative decisions and court decisions cited in the narrative. Published court decisions arising from a state mandate determination by the Board of Control or the Commission are exempt from this requirement; and
- (E) statutes, chapters of original legislatively determined mandate and any amendments.


8. CLAIM CERTIFICATION

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

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

Antonio E. Acosta

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



Signature of Authorized Local Agency or
School District Official

City Manager, Union City

Print or Type Title

29 June 2017

Date

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

5. WRITTEN NARRATIVE
IN SUPPORT OF UNION CITY TEST CLAIM
IN RE
MUNICIPAL REGIONAL STORMWATER PERMIT ISSUED BY
THE CALIFORNIA REGIONAL WATER QUALITY CONTROL
BOARD,
SAN FRANCISCO BAY REGION
NPDES NO. CAS612008
ISSUED AS ORDER NO. R2-2015-0049 (NOVEMBER 19, 2015)

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NARRATIVE STATEMENT IN SUPPORT OF TEST CLAIM

I. INTRODUCTION

The City of Union City (City or Union City) seeks the Commission on State Mandate's (Commission) approval of claims to recover costs associated with obligations mandated by several provisions of the Municipal Regional Stormwater Permit issued on November 19, 2015, (MRP2) by the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board).¹ The MRP2 regulates the discharge of storm water runoff from the municipal separate storm sewer systems (MS4s) maintained by a total of 76 cities, counties, and flood control districts within the jurisdiction of six Bay Area regional stormwater programs.

This Test Claim addresses three broad categories of mandates imposed by the MRP2. First, Union City seeks reimbursement for costly MRP2 requirements to achieve greater levels of trash load reduction than previously required. That is, the MRP2 mandates that the City undertake activities to remove even greater amounts of trash from its MS4. Second, the City seeks reimbursement for costly "green infrastructure" requirements in the MRP2 that compel the construction of capital projects like "green streets" in order to reduce the amount of mercury and PCBs entering the MS4. Third, and only as a precaution, Union City seeks reimbursement for monitoring requirement costs the MRP2 continues from the prior permit. These monitoring requirements were initially imposed in the prior permit, MRP1,² and are pending before the Commission in Consolidated Test Claims 10-TC-01, 10-TC-02, 10-TC-03 and 10-TC-05. The City does not believe it is or should be required to raise those same monitoring cost issues in this Test Claim, but does so in an abundance of caution.

¹ A copy of the MRP2, NPDES No. CAS612008, issued as Order No. R2-2015-0049 (November 19, 2015), is attached hereto as Exhibit 1.

² Prior to the effective date of the MRP2, Union City was regulated by Permit No. CAS612008 issued by Order No. R2-2009-0074 on October 14, 2009, amended by Order No. R2-2011-0083 on November 28, 2011 ("MRP1" or the "Prior Permit"), a copy of which is attached as Exhibit 2.

Since the last time the Commission heard a municipal storm water test claim, the California Supreme Court has clarified the law in this area by issuing its opinion in *Department of Finance v. Commission on State Mandates* (2016) 1 Cal.5th 749 (“*Dep’t of Finance*”). The High Court upheld the Commission’s determination that the challenged storm water provisions are state mandates rather than federal mandates. In addition, the Supreme Court clarified that opponents of the test claim, not the claimant, bear the burden of proving the applicability of any exceptions to the “general rule requiring reimbursement of all state-mandated costs.” (*Id.* at 370-71.)

Under existing law and new Supreme Court authority, the new activities Union City must undertake to comply with the MRP2 are state mandates subject to subvention. The City respectfully requests that the Commission approve this Test Claim so that the MRP2 mandates are funded and the City can continue its cooperation with the Regional Board to improve water quality in the San Francisco Bay with the necessary funding. Union City is committed to the improvement and maintenance of the quality of waters of the Bay and its tributaries, and will comply with the MRP2 to the best of its ability. Further, the City supports many of the objectives the MRP2 is attempting to achieve. The City submits this Test Claim only to address the fundamental issue of the limited financial ability of the City and its taxpayers to pay for the necessary activities.

II. LEGAL AND PROCEDURAL BACKGROUND

A. Regional Stormwater Permits

When a Regional Water Board issues a stormwater permit, it is implementing both federal and state law:

Part of the federal Clean Water Act is the National Pollutant Discharge Elimination System (NPDES), “[t]he primary means” for enforcing effluent limitations and standards under the Clean Water Act. (*Arkansas v. Oklahoma, supra*, 503 U.S. at 101, 112 S.Ct. 1046.) The NPDES sets out the conditions under which the federal EPA or a state with an approved water quality control program can issue permits for the discharge of pollutants in

wastewater. (33 U.S.C. § 1342(a) & (b).) In California, wastewater discharge requirements established by the regional boards are the equivalent of the NPDES permits required by federal law. (§ 13374.)

City of Burbank v. State Water Res. Control Bd. (2005) 35 Cal.4th 613 at 619-621. Section 402(p) of the federal Clean Water Act establishes that an MS4 permit:

- (i) may be issued on a system or jurisdiction-wide basis;
- (ii) shall include a requirement to effectively prohibit non-storm water discharges into the storm sewers; and
- (iii) shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.

33 U.S.C. § 1342(p)(3)(B).³

California is among the states that are authorized to implement the NPDES permit program. 33 U.S.C. § 1342(b). Permits issued by the regional water boards under this authority must impose conditions that are at least as stringent as those required under the federal act. 33 U.S.C. § 1371; Cal. Water Code § 13377.

However, relying on its state law authority or discretion, the regional water boards are free to issue permits that impose limits or conditions in excess of those required under the federal law where

³ The relevant provisions of the Clean Water Act are included with the documentation in Section 7, Exhibit 3, of this Test Claim.

necessary to achieve higher water quality standards and objectives established under state law:

In California, the controlling law is the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), which was enacted in 1969. Its goal is “to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.” The task of accomplishing this belongs to the State Water Resources Control Board (State Board) and the nine Regional Water Quality Control Boards; together the State Board and the regional boards comprise “the principal state agencies with primary responsibility for the coordination and control of water quality.”

Whereas the State Board establishes statewide policy for water quality control, the regional boards “formulate and adopt water quality control plans for all areas within [a] region”. The regional boards’ water quality plans, called “basin plans,” must address the beneficial uses to be protected as well as water quality objectives, and they must establish a program of implementation. Basin plans must be consistent with “state policy for water quality control.”

City of Burbank v. State Water Res. Control Bd. (2005) 35 Cal.4th 613 at 619 (internal citations omitted). The California Water Code expressly anticipates that the uses and objectives set forth in basin plans and the need to prevent nuisance will require permits issued by regional water boards to impose more stringent regulatory controls than would otherwise result from federal law:

Notwithstanding any other provision of this division, the state board or the regional boards shall, as required or authorized by the Federal

Water Pollution Control Act, as amended, issue waste discharge requirements and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.

Cal. Water Code § 13377.

B. MRP2 and the MRP1 (the Prior Permit)

The MRP2 was issued by the Regional Water Board, an executive agency of the State of California. It governs stormwater discharges in some 76 different municipal entities (e.g., cities, counties, and flood control and water conservation districts). (Ex. 1 at 1-2.) Union City is one of the Permittees participating in the Alameda Countywide Clean Water Program (the “Alameda Countywide Program”).

The permit that formerly governed Union City was Permit No. CAS612008 issued by Order No. R2-2009-0074 on October 14, 2009, amended by Order No. R2-2011-0083 on November 28, 2011 (“MRP1” or the “Prior Permit”). (Ex. 1 at 1; Ex. 2.) For purposes of establishing that the provisions of the MRP2 constitute new programs or a higher level of service, the MRP2’s provisions are compared to the MRP1.

C. State Mandate Law

The Commission is familiar with the basic legal framework that governs its consideration of test claims. Union City will therefore provide only a brief summary of the major legal principles. Article XIII B section 6 of the California Constitution provides in relevant part:

Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse such local governments for the cost of such program or increased level of service

The purpose of section 6 “is to preclude the state from shifting financial responsibility for carrying out governmental functions to local agencies, which are ‘ill equipped’ to assume increased financial responsibilities because of the taxing and spending limitations that articles XIII A and XIII B impose.” (*County of San Diego v. State of California* (1997) 15 Cal.4th 68, 81; *County of Fresno v. State of California* (2000) 53 Cal.3d 482, 487.) The section “was designed to protect the tax revenues of local governments from state mandates that would require expenditure of such revenues.” (*County of Fresno, supra*, at 487; *Redevelopment Agency v. Comm’n on State Mandates* (1997) 55 Cal.App.4th 976, 984-85.) The Legislature implemented section 6 by enacting a comprehensive administrative scheme to establish and pay mandate claims. (Cal. Gov’t Code §§ 17500 *et seq.*; *Kinlaw v. State of California* (1991) 54 Cal.3d 326, 331, 333 [statute establishes “procedure by which to implement and enforce section 6”].)

The legal landscape in this area has become much clearer since the last time the Commission rendered a decision on a municipal stormwater permit test claim as a result of the California Supreme Court’s decision in *Dep’t of Finance*. The High Court summarized the basic principle: “Under our state Constitution, if the Legislature or a state agency requires a local government to provide a new program or higher level of service, the local government is entitled to reimbursement from the state for the associated costs.” (1 Cal.5th at 754.)

1. **Parties Opposing Union City Bear the Burden of Proving Exceptions to the General Constitutional Subvention Requirement**

For the purposes of future test claim proceedings, one of the most important aspects of *Dep’t of Finance* is the Court’s discussion of the burdens of the parties before the Commission. Under *Dep’t of Finance*, once claimants demonstrate new programs or increased levels of service are being imposed, the burden of proof shifts to test claim opponents (such as, presumably, the Regional Water Board), if any appear, to prove that the requirements at issue are excepted from the general subvention requirement:

Section 6 establishes a **general rule requiring reimbursement** of all state-mandated costs. Government Code section 17556, subdivision (c), codifies an exception to

that rule. Typically, **the party claiming the applicability of an exception bears the burden of demonstrating that it applies.** [Citations.] Here, the State must explain why federal law mandated these requirements, rather than forcing the Operators to prove the opposite.

(*Dep't of Finance*, 1 Cal.5th at 769 citing *Simpson Strong-Tie Co., Inc. v. Gore* (2010) 49 Cal.4th 12, 23 and *Long Beach Police Officers Assn. v. City of Long Beach* (2014) 59 Cal.4th 59, 67, emphasis added.) Thus, for Union City's test claim, the City must establish that the MRP2 requires new programs and/or higher levels of service, but the applicability of any exceptions to the "general rule requirement reimbursement" must be proven, if at all, by a test claim opponent.

Moreover, the Supreme Court's reasoning regarding the federal mandates exception must apply with equal force to all the "exception[s] to that [general] rule" listed in Government Code section 17556, not just the federal mandates exception in subdivision (c). For example, to the extent the Regional Water Board contends that the fee authority exception in section 17556, subdivision (d), is applicable to Union City's test claim (see Ex. 1 at p. A-21), the Regional Water Board bears the burden of proving the exception applies and Union City cannot be forced to "prove the opposite."

2. Statutory Exceptions to the General Rule Requiring Subvention Must Be Construed Narrowly and the Constitution Must to Construed Broadly

Furthermore, in evaluating the applicability statutory exceptions of the constitutional "general rule," the Commission must construe the exceptions narrowly. (*National City v. Fritz* (1949) 33 Cal.2d 635, 636–37 (applying "the rule that exceptions in a statute are to be strictly construed . . . [citations]."); *Dept. of Alcoholic Beverage Control v. Alcoholic Beverage Control Appeals Board* (2017) 7 Cal.App.5th 628, 641 (applying the "well-established rule that [a]n exception to a statute is to be narrowly construed," internal quotations and citations omitted); *Corey v. Knight* (1957) 150 Cal.App.2d 671, 680 (statutory "exceptions are to be narrowly, not broadly, construed").) Accordingly, when considering anticipated arguments from the Regional Water Board

about the applicability of section 17556 exceptions, only narrow interpretations of the exceptions are permissible.

The rule requiring narrow construction of statutory exceptions dovetails with the principle that ballot initiatives amending the Constitution must be interpreted broadly to implement the will of the voters. The exceptions listed in section 17556 do not appear anywhere in Article XIII B, section 6. As the court in *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1564 observed, “[t]he constitutional subvention provision and the statutory provisions which preceded it do not expressly say that the state is not required to provide a subvention for costs imposed by a federal mandate.” (*Id.* at p. 1593.)⁴ Rather, these exceptions were developed by the legislature and the courts rather than the voters.

In interpreting the scope of exceptions to the general rule requiring subvention, the corollary rule is that the Constitution “is not to be interpreted according to narrow or supertechnical principles, but liberally and on broad general lines, so that it may accomplish in full measure the objects of its establishment and so carry out the great principles of government.” (*Amador Valley, supra*, 22 Cal. 3d at pp. 244-45 quoting *Stephens v. Chambers* (1917) 34 Cal.App. 660, 663-664.) In light of the objectives of Proposition 4, the plain language of the Constitution requiring subvention whenever the state imposes new programs or higher levels of service must be broadly construed.

3. The Federal Mandates Exception Does Not Apply to the Challenged Requirements Because the Regional Water Board Exercised its Discretion by Virtue of a “True Choice”

In *Dep’t of Finance*, the Supreme Court also confirmed that application of the federal mandates exception turns on whether a state requirement was imposed because it was compelled by federal law, or

⁴ Article XIII B, section 9, mentions federal mandates as excluded from definition of “appropriates subject to limitation,” but they are not mentioned in section 6. The Supreme Court declined to address the “question whether ‘federal’ and ‘state’ mandates are mutually exclusive for purposes of state subvention” in *City of Sacramento v. State of California* (1990) 50 Cal.3d 51, 71, fn. 16.

whether it was “imposed as a result of the state’s discretionary action.” (1 Cal.5th at 754). If it is compelled by federal law, the state must implement a federal mandate and no reimbursement is required. On the other hand, if the requirement is imposed as a result of the state’s discretionary action, reimbursement is required.

The Supreme Court summarized applicable case law on the matter, and opined that, “if federal law gives the state discretion whether to impose a particular implementing requirement, and the state exercises its discretion to impose the requirement by virtue of a ‘true choice,’ the requirement is not federally mandated” and reimbursement is required. (*Dep’t of Finance*, 1 Cal.5th at 765.) In applying this rule to the County of Los Angeles claims, the Court analyzed the Clean Water Act, the Porter-Cologne Act, and related regulations. The Court found that the regional board in that case was given discretionary power to fashion requirements which it determined would meet the Clean Water Act’s maximum extent practicable (“MEP”) standard. (*Id.* at 767-68.) Federal law did not compel these requirements, because the State’s NPDES program is undertaken on a voluntary basis. (*Id.* at 767.) As the Court noted, the State was not compelled to operate its own permitting system. (*Id.*) The Supreme Court further found that the federal regulations gave the regional board discretion to develop and issue municipal storm water permits and determine which specific controls would be required. (*Id.* at 767-68.) Accordingly, the regional board’s exercise of a “true choice” constitutes a state mandate of costs associated with the contested permit provisions. (*Id.* at 769, 770-72 [analyzing whether inspection and trash receptacle conditions were mandated by Clean Water Act].)

III. STATEMENT THAT MANDATED COSTS EXCEED \$1,000

Union City states that the actual and/or estimated costs resulting from the mandates imposed by the MRP2 exceeds one thousand dollars (\$1,000), as set forth in this Written Narrative and in the declarations included in Section 6 of this Test Claim.

IV. THE UNFUNDED MANDATES AT ISSUE IN THIS TEST CLAIM

The MRP2 contains 24 separate provisions that establish the prohibitions, limitations, and obligations of Claimants and other

Permittees. This Test Claim pertains primarily to two categories of mandates:

- Provision C.10—Trash Load Reduction; and,
- Provision C.3.j, C.11 and C.12—Mercury and PCB Controls.

In addition, and in an abundance of caution, this Test Claim also includes the continuation of Provision C.8—Monitoring requirements first imposed in the MRP1 and maintained as requirements in the MRP2. Union City does not believe it is or should be required to reassert these C.8 requirements in this Test Claim because the same requirements are at issue in Consolidated 10-TC-01, 10-TC-02, 10-TC-03 and 10-TC-05, currently pending before the Commission. Union City would be willing to withdraw the C.8 issues from this Test Claim with assurances from the Commission that no waiver, forfeiture or abandonment of rights to subvention would result.

The requirements addressed in this Test Claim, as explained in more detail below, are “programs” within the meaning of Article XIII B, section 6, in that they require Union City to provide certain services to the public. The requirements are unique to public entities like Union City because they arise from the operation of a municipal separate storm sewer system under NPDES permits issued only to municipalities and which require activities that are not required of private non-governmental dischargers. These requirements include the development and amendment of government planning documents, the inspection of property, the development and construction of public works projects and other purely governmental functions.⁵

A test claim must be filed with the Commission “not later than 12 months following the effective date of a statute or executive order, or within 12 months of first incurring increased costs as a result of a statute or executive order, whichever is later. For purposes of claiming based on the date of first incurring costs, ‘within 12 months’ means by June 30 of the fiscal year following the fiscal year in which increased

⁵ Orders issued by the Regional Board such as the MRP are “executive orders” within the meaning of Government Code section 17516 and thus properly subject to test claim proceedings. (*County of Los Angeles v. Commission on State Mandates* (2007) 150 Cal.App.4th 898, 920.

costs were first incurred by the test claimant.” (Cal. Code Regs., tit. 2, § 1183.1, subd. (b).)

Union City first incurred costs to comply with the MRP2 during fiscal year 2015-2016, which ended on June 30, 2016.⁶ As such, this Test Claim is timely filed.

A. Trash Load Reduction

Provision C.10 of the MRP2 requires Union City and other Permittees to implement a number of trash-related programs that were not required by the MRP1. The specific sections that impose state mandated costs are identified below along with detailed descriptions of the new activities and costs that arise from the mandate and existing activities and costs that are modified by the mandate.

1. Description of Trash Load Reduction New and Existing Activities

(a) Provision C.10.a: Trash Load Reduction

Provision C.10 of the MRP2 requires Union City and other permittees to implement a number of trash-related programs that were not required by the MRP1.

Provision C.10.a requires Union City to undertake new activities to reduce trash loads from municipal separate storm sewer systems (“MS4s”) to continue progress toward meeting the goal of 100 percent trash load reduction or no adverse impact to receiving waters from trash by July 1, 2022. (MRP2 at 97.) The MRP2 mandates compliance with the following new schedule and compliance deadlines:

Schedule – Permittees shall reduce trash discharges from 2009 levels, described below, to receiving waters in accordance with the following schedule:

- a. 70 percent by July 1, 2017; and
- b. 80 percent by July 1, 2019.

⁶ Ruark Declaration, ¶ 9.

(*Ibid.*) Though the MRP1 stated that Permittees must achieve phased annual reductions in trash loading culminating in 100 percent by 2022, and included an enforceable deadline of 40 percent reduction by 2014, the MRP1 was rescinded on the effective date of the MRP2 (January 1, 2016) and so the 2017 and subsequent reductions were compelled by the MRP2. The Regional Water Board recognized that the MRP2 mandates an increased level of service, and explicitly found in Finding C.10-8 that “[t]his Permit builds on the data and information collected in the last permit term and **increases expectations of Permittees in the Permit.**” (MRP2 at A-90, emphasis added.) The Regional Board described the 70 percent reduction requirement as the “2017 mandatory deadline.” (*Id.* at A-91) The Regional Water Board explained that the 2017 and later reductions were goals in the MRP1 have become enforceable mandates in the MRP2: “The **compliance deadlines** are consistent with the previous permit[']s **goals** of 70 percent trash load reductions by 2017 and 100 percent trash load reduction (or no adverse trash impact) by 2022.” (*Ibid.*, emphasis added.) Moreover, the MRP added an additional milestone of 80 percent trash load reduction by July 1, 2019. These additional phased trash load reduction mandates, beyond the requirements of the MRP1, have compelled the City to incur significant expenses in order to comply. These trash load reduction requirements constituted a new program, when only the planning requirements and first phases of reduction were imposed in the MRP1, and the MRP2 requirement to achieve increased levels of load reduction is an increased level of service in comparison to the MRP1.

(b) Provision C.10.b: Demonstration of Trash Reduction Outcomes

Provision C.10.b requires Permittees to maintain, and provide for inspection and review upon request, documentation of the design, operation, and maintenance of each of their full trash capture systems, including the mapped location and drainage area served by each system. (MRP2 at 99-102.) This provision specifies detailed full trash capture system installation and maintenance instructions, which are more prescriptive, burdensome and costly than MRP1 to fulfill. The MRP1 generally required Permittees to install and maintain full trash capture devices, which allowed each municipality greater discretion in identifying effective as well as cost efficient methods for meeting trash load reduction goals. Now, under the MRP2, compliance by means of

Other Trash Management Actions (meaning non-full trash capture systems) has become so burdensome and costly that Union City has determined installation of full trash capture systems is the least costly compliance option. Provision C.10.b requires increased activities by Union City that are best characterized as a higher level of service in comparison to the MRP1.

2. C.10 Trash Load Reduction Costs Incurred by Union City

City staff has projected City-wide costs to implement these measures, as well as the costs associated with specific tasks necessary to implement the remaining C.10 provisions (including planning, design, installation, purchase, operation, and maintenance of full trash capture devices, long-term trash load reduction planning, and reporting).

As part of the City's Long Term Trash Reduction Plan, in June 2015, the City commissioned United Storm Water, Inc. to install an additional 200 full trash capture devices for a total of \$99,994.52. The City had anticipated the new full trash capture installation requirements set forth in the MRP2 and commissioned the installation of the trash capture devices in order to comply with Provision C.10 just prior to the MRP2's effective date. This cost was paid out of the City's clean water fund. The City had previously installed 150 units, paid by a grant from the EPA. The City is planning to install an additional 200 units in the summer of 2018, totaling 550 full trash capture devices. It is estimated that the purchase and installation of the additional 200 devices will cost the City another \$100,000. Therefore, in total, Union City's cost to install trash capture devices required to comply with the MRP2 is approximately \$200,000.

In April 2017, the City adopted a resolution approving an appropriation of \$432,500.57 from the City's Vehicle Replacement Fund and awarded a contract in the amount of \$432,423.57 to Owen Equipment of Fairfield, California for the procurement of one Storm Drain Cleaner. This contract award was determined to be vital to minimize stormwater pollution, and maintain and clean the newly installed full trash capture devices so as to be in compliance with the MRP2. The City had already owned a Vactor truck; however, it is an old device and unable to fulfill the full trash capture maintenance requirements set forth in the MRP2. Renting a Vactor truck costs

\$10,000 per month. The City ultimately determined that purchasing a new Vactor truck would be more cost effective than renting a device. The procurement for the equipment purchase was made available from the City's Vehicle Replacement Fund.

The MRP2 requires the City to clean the trash capture devices twice a year. It will take an estimated three months to clean all 550 units once. Three months of crew time of the Vactor crew is estimated to cost \$42,500. Thus, cleaning the units twice per year will take the City six months. At a cost of \$85,000 for labor for six months of the crew time, yearly maintenance costs are estimated to total \$145,000.

City staff has worked to identify best management practices and control measures that they believe will be necessary in order to achieve the target of 100% trash reduction from municipal separate storm sewer systems by July 1, 2022, and with interim milestones of 70% reduction by July 1, 2017 and 80% by July 1, 2019, as required by Provision C.10.a. These practices and measures include the following:

- Installed full trash capture devices in our high trash generating areas
- Increased cleaning of Continuous Deflection Separators (CDS) Units and Catch basins pre and post storm event season.
- Increased public awareness by installing clean water advertisement in all of Union City's transit buses
- Increased Public Outreach with at least 8 different yearly events
- Distributed over 500 reusable bags
- Passed a Plastic Bag Ban
- Conducted a least two creek clean up events per year
- Utilized Work furlough crews to assist in weekly trash pick-up along major arterials and collector streets.
- Installed over 150 trash capture devices (TCD) in our city-owned catch basins which surround our retail and commercial properties as well as a portion of our high density residential properties.
- In addition, the City has a total of 12 CDS units installed on both private and public properties.
- It is estimated that these measures serve a combined area of 293.28 acres.

The City has and will incur internal costs to implement the actions described above, but is not presently able to specify the magnitude of those costs.

B. Mercury and PCB Controls

Sections C.3.j, C.11, and C.12 require Permittees to implement Green Infrastructure projects to comply with mercury and PCB load reduction requirements. While the MRP1 required Permittees to pursue pilot and assessment projects, primarily on Countywide levels regarding PCBs and mercury, Green Infrastructure projects constitute a new requirement in the MRP2, requiring new actions by Union City and other Permittees.

Green Infrastructure is a term that appears throughout the MRP2, which defines the term as follows:

Infrastructure that uses vegetation, soils, and natural processes to manage water and create healthier urban environments. At the scale of a city or county, green infrastructure refers to the patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the scale of a neighborhood or site, green infrastructure refers to stormwater management systems that mimic nature by soaking up and storing water.

(MRP2 at 147.) The MRP2's green infrastructure requirements are new; the term was not used even once in the MRP1.

1. Description of Mercury and PCB Controls New and Existing Activities

(a) Provision C.3.j: Green Infrastructure Planning and Implementation

Provision C.3.j requires Permittees to complete and implement a Green Infrastructure Plan for the inclusion of low impact development drainage design into storm drain infrastructure on public and private lands, including streets, roads, storm drains, parking lots, building roofs, and other storm drain infrastructure elements. (MRP2 at 43-48.) The Green Infrastructure Plan is a new program that was not required by the MRP1.

(b) Provision C.11.a: Implement Control Measures to Achieve Mercury Load Reductions

As stated by the Regional Water Board in its Fact Sheet, Provision C.11.a “requires Permittees to implement control measures to achieve mercury load reductions. In order to comply with this requirement, Permittees must identify the mercury control measures and the watersheds and management areas in which these measures will be implemented and a time schedule for implementation.” (MRP2 at A-106.) The Regional Water Board found that much of the mercury load reduction will be realized through “more extensive treatment elements (e.g., green infrastructure)” (*Id.* at A-107.) This is a new program that was not required under the MRP1.

(c) Provision C.11.b: Assess Mercury Load Reductions from Stormwater

As stated in the Regional Water Board’s Fact Sheet, “Provision C.11.b. requires Permittees to develop and implement an assessment methodology and data collection program to quantify mercury loads reduced through implementation of any and all pollution prevention, source control and treatment control efforts required by the provisions of this Permit or load reductions achieved through other relevant efforts” (MRP2 at A-107.) The MRP1 did not include such specific requirements, but simply obliged Permittees to monitor methylmercury in runoff discharges, analyze aqueous grab samples, and report monitoring results annually. This is a new program and/or a higher level of service that was not required under the MRP1.

(d) Provision C.11.c: Plan and Implement Green Infrastructure to Reduce Mercury Loads

The MRP2 Fact Sheet states that “Provision C.11.c. requires Permittees to implement green infrastructure projects during the term of the permit to achieve mercury load reductions of 48 g/year by June 30, 2020.” (MRP2 at A-109.) The MRP1 merely required Permittees to monitor, measure, and report mercury load reduction. The MRP2 requirement to reduce mercury loads through green infrastructure projects is a new program requiring new actions that Union City was not required to undertake under the MRP1.

(e) Provision C.12.a: Implement Control Measures to Achieve PCBs Load Reductions

As summarized in the Fact Sheet, Provision C.12.a “requires Permittees to implement control measures to achieve specific PCBs load reductions. In order to comply with this requirement, Permittees must identify the PCBs control measures and the watersheds and management areas in which these measures will be implemented and a time schedule for implementation.” (MRP2 at A-116.) “This provision requires that Permittees achieve annual PCBs load reductions totaling 0.5 kg/yr by June 30, 2018, and 3.0 kg/yr by June 30, 2020.” (*Id.*)

The MRP1 included much more limited PCBs provisions focused primarily on a series of pilot projects as well as evaluation and reporting requirements. It did not order the load reduction actions and performance criteria included in the MRP2, which are new programs and higher levels of service.

(f) Provision C.12.c: Plan and Implement Green Infrastructure to Reduce PCBs Loads

The MRP2 Fact Sheet states that Provision C.12.c “requires Permittees to implement green infrastructure projects during the term of the Permit to achieve PCBs load reductions of 120 g/year by June 30, 2020.” (MRP2 at A-121.) As discussed earlier, green infrastructure projects constitute a new requirement and were not included in the MRP1.

(g) Provision C.12.d: Prepare Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations

As stated in the Fact Sheet, Provision C.12.d “requires Permittees to prepare a plan and schedule for PCBs control measure implementation and corresponding reasonable assurance analysis to quantitatively demonstrate that sufficient control measures will be implemented to attain the PCBs TMDL wasteload allocations.” (MRP2 at A-121.) No such requirement appears in the MRP1.

(h) Provision C.12.e: Evaluate PCBs Presence in Caulks/Sealants Used in Storm Drain or Roadway Infrastructure in Public Rights-of-Way

The Fact Sheet explains that Provision C.12.e “requires that Permittees collect samples of caulk and other sealants used in storm drains and between concrete curbs and street pavement and investigate whether PCBs are present in such material and in what concentrations.” (MRP2 at A-122.) No such requirement appears in the MRP1.

2. C.3.j/C.11/C.12 Mercury and PCB Reduction Costs Incurred by Union City

(a) Green Infrastructure Plan

As part of the City’s Green Infrastructure program, the Union City Council adopted a resolution authorizing the adoption of a Green Infrastructure Plan, as required by Provision C.3.j. The City is seeking to retain a consultant for the preparation of some of the tasks listed in the Framework for Green Infrastructure Plan Development (“Framework”) and has budgeted \$15,000 to support such assistance.

(b) First Green Street Infrastructure Project

On January 12, 2015, the City awarded a contract for the City’s first green street infrastructure improvement project to Star Construction in the amount of \$877,502.10. The final construction cost was \$1,029,998.50.

Total project related costs are as follows:

Design Fees	\$230,911
Construction Contract (Star Construction, Inc.)	\$1,029,998.50
Utilities	\$45,238.39
Construction Management (City Staff)	\$99,692.41
TOTAL	\$ 1,405,840.30

(c) South Decoto Green Streets Project

In September 2015, the City approved a contract award for the Granite Rock Company to complete improvements related to the South Decoto Green Streets Project. The South Decoto Green Streets Project is a sustainable redevelopment project in the Decoto District that aims to create ‘green’ infrastructure that mimics natural systems to reduce

reliance on essential city functions such as storm drainage. The project created tree-lined, pedestrian-friendly green streets, thereby contributing to overall quality of life while reducing water and air pollution, increasing groundwater recharge, and reducing water consumption.

Project related costs to date are as follows:

Design Engineering & Monitoring Contract (Bellecci and Associates)	\$ 548,990
Construction Contract (Granite Rock Company)	\$ 2,781,587
Construction Inspection Services Contract (Vali Cooper & Associates)/Material Testing Contract (Applied Materials)	\$ 163,722
Construction Staking Contract (Bellecci & Associates)	\$18,960
Estimated Project Management/Administration (City Staff)	\$ 75,000
Water Service Connection – ACWD Connection Fees	\$ 30,453
TOTAL	\$ 3,618,712

(d) H Street Green Street Improvements

In July, 2016, the City approved a contract award for the Granite Rock Company to complete improvements related to the H Street-Green Street Improvements Project. The City has not yet completed a final total accounting of actual costs; however, the projected total related costs are as follows:

Construction Contract (Granite Rock Company)	\$3,001,180.00
Construction Contingency (5% of Construction Contract)	\$150,000.00
Inspection/Material Testing Services (Ghirardelli Associates)	\$132,039.60
Estimated Project Management/Administration (City Staff)	\$40,800.40
Alameda County Water District – Water Service Fees	\$50,000.00
Design Contract (WRECO) – Awarded by City Council 9/23/14	\$499,980.00

TOTAL	\$3,874,000.00
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In order to meet the PCB and Mercury load reduction goals for 2040, the City has projected a cost of an additional \$72.5 million – amounting to \$3 million per year for the next 23 years.

(e) Union City Share of Alameda Countywide Program Costs

In addition to the aforementioned costs, the City has paid additional costs to the Alameda Countywide Program. For FY15/16 and FY 16/17, Union City paid \$106,466 to the Alameda Countywide Program each year to support MRP2 compliance actions. The City’s share of the Alameda Countywide Program’s costs for the state mandated costs at issue in this Test Claim is set forth in the table below.

Task	FY	Program Cost	Union City Share (5.31%)
C3, 11 and 12 GIS Development: Psomas (Through May)	16/17	\$42,752	\$2,270
C3, 11 and 12 GIS Support: Geosyntec (Through April)	16/17	\$29,008	\$1,540
Green Infrastructure Plan Development: Horizon (Through April)	16/17	\$29,500	\$1,566
16/17 TOTAL			\$5,377
Green Infrastructure Plan Development: Horizon	15/16	\$40,000	\$2,124
Trash mapping GIS: EOA	15/16	\$25,000	\$1,328
15/16 TOTAL			\$3,452

C. Continuation of C.8 Monitoring Costs

As explained above, out of an abundance of caution, the City is seeking reimbursement in this Test Claim for the continuation of C.8 monitoring costs that are already before the Commission in Consolidated Test Claims 10-TC-01, 10-TC-02, 10-TC-03 and 10-TC-05.

To avoid unnecessary duplication, Union City hereby incorporates by this reference all of the portions of the record in Consolidated proceedings regarding these mandates. For the purposes of this test claim, the City has included documentation of the actual costs associated with the C.8 provisions for fiscal year 2016/2017. The Countywide Clean Water Program's expenditures for complying with Provision C.8 in fiscal year 2016/2017 were \$429,476, and Union City's share of those costs was \$22,805.

V. STATEWIDE COST ESTIMATE OF INCREASED COSTS FOR FISCAL YEAR 2016/2017

Since this Test Claim is based on the MRP2, the statewide impact of the permit is limited to those Bay Area jurisdictions that are subject to the MRP2. Neither Union City nor the Alameda Countywide Program has access to detailed cost information for each jurisdiction subject to the MRP2, especially those outside Alameda County. As explained in the attached Declaration of James Scanlin, the City used its own cost information and population size, combined with information available to the Alameda Countywide Program, to project estimated cost impacts for all jurisdictions subject to the MRP2. For Fiscal year 2016/2017: the C.10 Trash Load Reduction mandates are estimated to cause \$16,324,000 in costs statewide; the C.3.j, C.11 and C.12 Green Infrastructure mandates are estimated to cause \$414,029 in costs statewide; and the continuation of the C.8 monitoring obligations is estimated to cause \$1,397,892 in costs statewide.

VI. DATES ON WHICH COSTS WERE FIRST INCURRED AFTER THE EFFECTIVE PERIOD

Most of the state mandated costs claimed above are direct costs and/or major expenditures and efforts that comprise the majority of the relevant City expenditures and that are most readily ascertainable. However, the precise dates on which Union City first incurred increased costs as a result of the new activities and modified existing activities mandated by MRP2 comprise mostly indirect costs from staff actions.

Regarding Provisions C.10.a and C.10.b, costs were first incurred after the effective date of MRP2 on January 25, 2016, when Tom Ruark, the City Engineer for Union City, received and reviewed the Draft Template for Provision C.10 of the Annual Report from the Bay

Area Stormwater Management Agencies Association (BASMAA) in preparation for the planning, coordination, and implementation of trash load reduction strategies designed to satisfy Provisions C.10.a and C.10.b. Ruark has determined that the value of his time is \$207 per hour. His review of the documentation and preparation of responsive comments took approximately 60 minutes, costing the City \$207.00

Regarding Provision C.3.j, costs were first incurred after the effective date of MRP2 on February 10, 2016, when Ruark received and reviewed an agenda for the first Green Infrastructure Working Group meetings organized by the Clean Water Program and BASMAA and attended by other Working Group members from the Clean Water Program. Ruark attended three of these meetings, during which the Working Group began developing a Framework for Green Infrastructure Plan Development for meeting the requirements set forth in Provisions C.3.j. Review of the agenda took approximately 15 minutes, costing the City \$51.57. Attending the meetings took approximately nine hours of Ruark's, costing the City \$1,863.00.

Regarding, Provisions C.11 and C.12, costs were first incurred after the effective date of MRP2 on January 29, 2016, when Ruark received and began reviewing the draft agenda from the Clean Water Program in preparation for a PCB Reduction Strategy Working Group meeting. During the meeting, which took place on February 2, 2016 and was attended by other Working Group members from the Clean Water Program, the Working Group began the process of strategizing activities to meet the PCB and Mercury load reduction goals through green infrastructure set forth in Provisions C.11 and C.12. The PCB Reduction Strategy Working Group is also supported by the Clean Water Program and BASMAA. Review of the agenda for the first meeting took approximately 15 minutes, costing the City \$51.57. Attendance of this meeting took approximately three hours, so this activity cost the City \$621.00.

As explained in the attached Declaration of James Scanlin, it has been determined that Arleen Feng, the Monitoring Program Manager for the Clean Water Program, spent approximately 20 minutes on January 4, 2016, reviewing and drafting correspondence with representatives of the Bay Area Stormwater Management Agencies Association (BASMAA) Monitoring/Pollutants of Concern Committee in

order to finalize an agenda for a meeting scheduled for January 6, 2016. Ms. Feng also spent approximately four hours attending the meeting on January 6, 2016. Also as a result of Scanlin's investigation and interviews, he determined that the purpose of the meeting was to continue implementation of C.8 monitoring obligations originally imposed under MRP1 and continued on and mandated by MRP2. Ms. Feng's hourly rate, including overhead, is \$181.00. So, the first incurred C.8 costs under MRP2 were \$36.20 on January 4, 2016, and \$724.00 on January 6, 2016. As indicated above, Union City's specific share of these costs would be approximately 5.1%.

VII. IDENTIFICATION OF FUNDING SOURCES

Government Code section 17553, subdivision (b)(1)(F), requires the City to identify available funding sources for this program. With the exception of the partial funding sources set forth below, the City is not aware of any state, federal or non-local agency funds that are or will be available to fund the MRP2 new activities at issue in this Test Claim.

Pursuant to Proposition 84 – Urban Greening for Sustainable Communities Grant Program – the City was awarded \$724,000 for the Decoto Green Street Project. The City received a \$3 million grant from the Proposition 84 Storm Water Grant Program from the State Water Resources Control Board to implement similar improvements via the South Decoto Green Streets Project (Phase II). The City also received another \$3 million in Prop 84 Storm Water Grant funds to install green infrastructure along 10 contiguous blocks along an arterial (H St. between 4th and 12th Streets) in the Decoto District. Therefore, the Proposition 84 funds represent past funding sources to offset compliance with the C.11 and C.12 green infrastructure-related requirements.

It is unlikely the City will be able to avail itself of future grant opportunities. Available grant opportunities that would likely support the City's stormwater programs have a dollar for dollar matching requirement, which constitutes a steep increase from the 30 percent matching requirements for Proposition 84 Storm Water Grant funds. The City consequently has no grant applications pending. Furthermore, multiple jurisdictions must compete for limited funding sources, creating stiff competition among municipalities. Therefore,

there are no other nonlocal agency funds that are or will be available to the City to pay for these increased costs.

As for the City's general purpose funds to support this program, the City has a Clean Water Fund, which obtains revenue from property tax assessments and a solid waste franchise surcharge. The City has no authority to increase these revenue sources without seeking voter approval under Proposition 218. Thus, the City does not have authority to increase these fees – only the voters have that authority.⁷ Furthermore, the money from the Clean Water Fund is already consumed by existing stormwater compliance costs and is insufficient to cover increased activities required by MRP2.

In addition to the Clean Water Fund, the City also relied on several other City revenue sources that are restricted to roadway projects. These revenues are to be used for street and road, bicycle and pedestrian path, and transit and paratransit services. To the extent that green streets projects constitute street maintenance are repair, these funds can be accessed, but not for additional project costs associated with the green infrastructure functions.

In sum, the City is unaware of potential funding sources from local or nonlocal agencies to offset the costs associated with complying with MRP2's mandates. Furthermore, the City lacks the authority to levy fees against residents to mitigate such costs.

VIII. PRIOR MANDATE DETERMINATIONS

Government Code section 17553, subdivision (b)(1)(G), requires Test Claimants to identify prior mandate determinations that may be related to the mandates at issue. The Commission's July 31, 2009, Statement of Decision in Test Claim Nos. 03-TC-04, 03-TC-19, 03-TC-20 and 03-TC-21 (*Los Angeles Regional Water Quality Control Board Order No. 01-182*) and the Commission's March 26, 2010, Statement of Decision in Test Claim No. 07-TC-09 (*San Diego Regional Water*

⁷ See *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal.App.4th, holding that a stormwater fee was a property related fee governed by Article XIII D of the California Constitution and that such a fee could not be imposed unless it was approved by the voters.

Quality Control Board Order No. R9-2007-0001) include analysis that are related to the mandates at issue in Union City's Test Claim.

IX. CONCLUSION

For the reasons set forth in this Test Claim package, Union City respectfully requests that the Commission approve the City's Test Claim.

2846911.1

6. DECLARATIONS
IN SUPPORT OF UNION CITY TEST CLAIM
IN RE
MUNICIPAL REGIONAL STORMWATER PERMIT ISSUED BY
THE CALIFORNIA REGIONAL WATER QUALITY CONTROL
BOARD,
SAN FRANCISCO BAY REGION
NPDES NO. CAS612008
ISSUED AS ORDER NO. R2-2015-0049 (NOVEMBER 19, 2015)

DECLARATION OF THOMAS RUARK

I, THOMAS RUARK, declare as follows:

1. I make this declaration in support of the Test Claim submitted by the City of Union City (the "City") to the Commission on State Mandates. Except where otherwise indicated, the facts set forth below are of my own personal knowledge, and if called upon to testify, I could and would competently testify to the matters set forth herein.

2. I have received the following credentials: In 1982, I received a Bachelor's of Science degree in Civil Engineering, with concentrations in Hydraulics and Hydrology, and Environmental Engineering from the University of Illinois, Urbana-Champaign. In 1985, I received a Professional Engineer License from the California Board for Professional Engineers, Land Surveyors, and Geologists.

3. I am employed by the City of Union City as the City Engineer. I was appointed by the City Manager and have held this position since September 2011. I supervise a staff of nine, consisting of two Inspectors and five Engineers. I am responsible for designing, managing and implementing all aspects (e.g., sampling design, field work, analytical analysis, quality control, data management, interpretation and reporting) of water quality monitoring and other compliance actions required by municipal stormwater National Pollutant Discharge Elimination System ("NPDES") permits issued to the City.

4. I have a total 35 years' experience as a civil engineer. I worked as GS 12 and Project Manager (civilian civil engineer) for the Navy, during which time I oversaw design and infrastructure improvements for naval bases in nine western states. From 1986 to 1995, I worked for the private firm, Bissell & Karn, Inc. (now Greiner), where I was promoted from Project Manager to Assistant Manager, to Branch Manager. I left Greiner in 1995 and founded Ruark and Associates, where I managed a staff of 14, designed infrastructure, including storm drain systems, and oversaw development, acting as assistant city engineers and city engineers.

5. Union City is subject to the Municipal Regional Stormwater NPDES Permit, issued by the California Regional Water Quality Control Board, San Francisco Bay Region ("Regional

1 Board”), Order No. R2-2015-0049 (“MRP 2”). I have reviewed MRP 2 and am familiar with its
2 requirements.

3 6. I have also reviewed and am familiar with the requirements of Order No. R2-2009-
4 0074 (NPDES Permit No. CAS612008) issued by the Regional Board on October 14, 2009,
5 amended by Order No. R2-2011-0083 on November 28, 2011 (“MRP 1”), under which the
6 City was also a Permittee.

7
8 7. Based on my understanding of the MRP 1 and the MRP 2, I believe the MRP 2
9 requires Permittees, including specifically Union City, to perform new activities that are unique to
10 local governmental entities that were not required by the MRP 1.

11 8. The MRP 2’s new activities include the following:

12 (a) Monitoring.

13 i. Requirements. Provision C.8 of the MRP 2 requires Permittees to
14 implement a number of water quality monitoring programs. These requirements are discussed in
15 our 2010 test claim, which is currently pending. The City continues to incur costs necessary to
16 comply with this Provision, which I discuss below.

17 (b) Trash.

18 ii. Requirements. Provision C.10 of the MRP 2 requires Union City
19 and other permittees to implement a number of trash-related programs that were not required by
20 the MRP 1.

21 (1) Provision C.10.a. requires Union City to undertake new
22 activities to reduce trash loads from municipal separate storm sewer systems (“MS4s”) to continue
23 progress toward meeting the goal of 100 percent trash load reduction or no adverse impact to
24 receiving waters from trash by July 1, 2022. (MRP 2 at 97.) The MRP 2 mandates compliance
25 with the following schedule and compliance deadlines:

26 **Schedule** – Permittees shall reduce trash discharges from 2009 levels, described below, to
27 receiving waters in accordance with the following schedule:

28 a. 70 percent by July 1, 2017; and

1 b. 80 percent by July 1, 2019.

2 (*Id.*) Though the MRP 1 stated that Permittees must achieve phased annual reductions in trash
3 loading culminating in 100 percent by 2022, and included an enforceable deadline of 40 percent
4 reduction by 2014, the MRP 1 was rescinded on the effective date of the MRP 2 (January 1, 2016)
5 and so the 2017 and subsequent reductions were compelled by the MRP 2. The Regional Board
6 recognized that the MRP 2 mandates an increased level of service, and explicitly found in Finding
7 C.10-8 that “[t]his Permit builds on the data and information collected in the last permit term and
8 **increases expectations of Permittees in the Permit.**” (MRP 2 at A-90, emphasis added.) The
9 Regional Board described the 70 percent reduction requirement as the “2017 mandatory deadline.”
10 (*Id.* at A-91) The Regional Board explained that the 2017 and later reductions were goals in the
11 MRP 1 have become enforceable mandates in the MRP 2: “The **compliance deadlines** are
12 consistent with the previous permit[']s **goals** of 70 percent trash load reductions by 2017 and 100
13 percent trash load reduction (or no adverse trash impact) by 2022.” (*Id.*, emphasis added.)
14 Moreover, the MRP 2 added an additional milestone of 80 percent trash load reduction by July 1,
15 2019. These additional phased trash load reduction mandates, beyond the requirements of the
16 MRP 1, have compelled the City to incur significant expenses in order to comply. These trash
17 load reduction requirements constituted a new program, when only the planning requirements and
18 first phases of reduction were imposed in the MRP 1, and the MRP 2 requirement to achieve
19 increased levels of load reduction is an increased level of service in comparison to the MRP.
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21
22
23 (2) Provision C.10.b. requires Permittees to “maintain, and
24 provide for inspection and review upon request, documentation of the design, operation, and
25 maintenance of each of their full trash capture systems, including the mapped location and
26 drainage area served by each system.” (MRP 2 at 99.) This provision specifies detailed full trash
27 capture system installation and maintenance instructions, which are more prescriptive,
28 burdensome and costly to fulfill. The MRP 1 generally required Permittees to install and maintain

1 full trash capture devices, which allowed each municipality greater discretion in identifying
2 effective as well as cost efficient methods for meeting trash load reduction goals. Now, under the
3 MRP 2, compliance by means of Other Trash Management Actions (meaning non-full trash
4 capture systems) has become so burdensome and costly that Union City has determined
5 installation of full trash capture systems is the least costly compliance option. Provision C.10.b.
6 requires increased activities by Union City that are best characterized as a higher level of service
7 in comparison to the MRP 1.

8 (c) Green Infrastructure.

9 i. Sections C.3.j., C.11, and C.12 require Permittees to implement Green
10 Infrastructure projects to comply with mercury and PCB load reduction requirements. While the
11 MRP 1 required Permittees to pursue pilot and assessment projects, primarily on Countywide
12 levels regarding PCBs and mercury, Green Infrastructure projects constitute a new requirement in
13 the MRP 2, requiring new actions by Union City and other Permittees.

14 1. Provision C.3. requires Permittees to “complete and implement a
15 Green Infrastructure Plan for the inclusion of low impact development drainage design into storm
16 drain infrastructure on public and private lands, including streets, roads, storm drains, parking lots,
17 building roofs, and other storm drain infrastructure elements.” (MRP 2 at 43.) The Green
18 Infrastructure Plan is a new program that was not required by the MRP 1.

19 2. Sections C.11 and C.12 of the MRP 2 require Permittees to
20 implement green infrastructure projects during the term of the Permit to achieve certain mercury
21 and PCB load reductions performance criteria set forth in the Permit. (MRP 2 at 107-112.)

22 a. Provision C.11.a. “requires Permittees to implement control
23 measures to achieve mercury load reductions. In order to comply with this requirement,
24 Permittees must identify the mercury control measures and the watersheds and management areas
25 in which these measures will be implemented and a time schedule for implementation.” (MRP 2
26 at A-106.) This is a new program that was not required under the MRP 1.

27 b. Provision C.11.b. “requires Permittees to develop and
28 implement an assessment methodology and data collection program to quantify mercury loads

1 reduced through implementation of any and all pollution prevention, source control and treatment
2 control efforts required by the provisions of the Permit or load reductions achieved through other
3 relevant efforts” (MRP 2 at A-107.) The MRP 1 did not include such specific requirements, but
4 simply obliged Permittees to monitor methylmercury in runoff discharges, analyze aqueous grab
5 samples, and report monitoring results annually. This is a new program and/or a higher level of
6 service that was not required under the MRP 1.

7 c. Provision C.11.c. requires Permittees to implement green
8 infrastructure projects during the term of the permit to achieve mercury load reductions of 48
9 g/year by June 30, 2020. (MRP 2 at 109-111.) The MRP 1 merely required Permittees to
10 monitor, measure, and report mercury load reduction. The MRP 2 requirement to reduce mercury
11 loads through green infrastructure projects is a new program requiring new actions that Union City
12 was not required to undertake under the MRP 1.

13 d. Provision C.12.a. requires “Permittees to implement control
14 measures to achieve specific PCBs load reductions. In order to comply with this requirement,
15 Permittees must identify the PCBs control measures and the watersheds and management areas in
16 which these measures will be implemented and a time schedule for implementation.” (MRP 2 at
17 A-116.) The MRP 1 included much more limited PCBs provisions focused primarily on a series
18 of pilot projects as well as evaluation and reporting requirements. It did not order the load
19 reduction actions and performance criteria included in the MRP 2, which are new programs and
20 higher levels of service.

21 e. Provision C.12.c. “requires Permittees to implement green
22 infrastructure projects during the term of the Permit to achieve PCBs load reductions of 120 g/year
23 by June 30, 2020.” (MRP 2 at A-121.) As was discussed earlier, green infrastructure projects
24 constitute a new requirement and were not included in the MRP 1.

25 f. Provision C.12.d. requires Permittees to “prepare a plan and
26 schedule for PCBs control measure implementation and corresponding reasonable assurance
27 analysis to quantitatively demonstrate that sufficient control measures will be implemented to
28

1 attain the PCBs TMDL wasteload allocations. (MRP 2 at 119.) No such requirement appears in
2 the MRP 1.

3 g. Provision C.12.e. requires that Permittees collect samples of
4 caulk and other sealants used in storm drains and between concrete curbs and street pavement and
5 investigate whether PCBs are present in such material and in what concentrations. (MRP 2 at
6 119.) No such requirement appears in the MRP 1.

7 9. Costs. The estimated costs associated with compliance with the new requirements
8 of the MRP 2 are summarized below. Union City first incurred costs to comply with the MRP 2
9 during fiscal year 2015-2016, which ended on June 30, 2016.

10 (a) General Assumptions.

11 The anticipated costs stated below are reasonable estimates based on available
12 information and best professional judgment of myself and other City staff, taking into account San
13 Francisco Bay Area market rates for Program and Permittee staff, outside consultants and services,
14 and materials.

15 (b) Provision C. 8 Costs.

16 A portion of the funds from the Alameda Countywide Clean Water Program is
17 allocated toward monitoring costs. James Scanlin's Declaration addresses the City's share of
18 these costs.

19 (c) Provision C.10 Costs.

20 (i) City staff has projected City-wide costs to implement these measures, as
21 well as the costs associated with specific tasks necessary to implement the remaining C.10
22 provisions (including planning, design, installation, purchase, operation, and maintenance of full
23 trash capture devices, long-term trash load reduction planning, and reporting).

24 (ii) As part of the City's Long Term Trash Reduction Plan, in June 2015, the
25 City commissioned United Storm Water, Inc. to install an additional 200 full trash capture devices
26 for a total of **\$99,994.52**. The City had anticipated the new full trash capture installation
27 requirements set forth in the 2015 MRP 2 and commissioned the installation of the trash capture
28 devices in order to comply with Provision C.10 just prior to the MRP's effective date. This cost

1 was paid out of the City's clean water fund. The City had previously installed 150 units, paid by a
2 grant from the EPA. The City is planning to install an additional 200 units in the summer of 2018,
3 totaling 550 full trash capture devices. It is estimated that the purchase and installation of the
4 additional 200 devices will cost the City another \$100,000. Therefore, in total, Union City's cost
5 to install trash capture devices required to comply with the MRP 2 is approximately **\$200,000**.

6 (iii) In April 2017, the City adopted a resolution approving an appropriation of
7 \$432,500.57 from the City's Vehicle Replacement Fund and awarded a contract in the amount of
8 **\$432,423.57** to Owen Equipment of Fairfield, California for the procurement of one Storm Drain
9 Cleaner. This contract award was determined to be vital to minimize stormwater pollution, and
10 maintain and clean the newly installed full trash capture devices. The City had already owned a
11 Vactor truck; however, it is an old device and unable to fulfill the full trash capture maintenance
12 requirements set forth in the MRP 2. Renting a Vactor truck costs \$10,000 per month. The City
13 ultimately determined that purchasing a new Vactor truck would be more cost effective than
14 renting a device. The procurement for the equipment purchase was made available from the City's
15 Vehicle Replacement Fund.

16 (iv) The MRP 2 requires the City to clean the trash capture devices twice a
17 year. It will take an estimated three months to clean all 550 units once. Three months of crew
18 time of the Vactor crew is estimated to cost \$42,500. Thus, cleaning the units twice per year will
19 take the City six months. At a cost of \$85,000 for labor for six months of the crew time, yearly
20 maintenance costs are estimated to total **\$145,000**.

21 (v) City staff has worked to identify best management practices and control
22 measures that we believe will be necessary in order to achieve the target of 100% trash reduction
23 from municipal separate storm sewer systems by July 1, 2022, and with interim milestones of 70%
24 reduction by July 1, 2017 and 80% by July 1, 2019, as required by Provision C.10.a. These
25 practices and measures include the following:

- 26 • Installed full trash capture devices in our high trash generating areas
- 27 • Increased cleaning of Continuous Deflection Separators (CDS) Units
and Catch basins pre and post storm event season.
- 28 • Increased public awareness by installing clean water advertisement in

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- all of Union City's transit buses
- Increased Public Outreach with at least 8 different yearly events
- Distributed over 500 reusable bags
- Passed a Plastic Bag Ban
- Conducted a least two creek clean up events per year
- Utilized Work furlough crews to assist in weekly trash pick- up along major arterials and collector streets.
- Installed over 150 trash capture devices (TCD) in our city-owned catch basins which surround our retail and commercial properties as well as a portion of our high density residential properties.
- In addition, the City has a total of 12 CDS units installed on both private and public properties.
- It is estimated that these measures serve a combined area of 293.28 acres.

The City has and will incur internal costs to implement the actions described above, but I am not presently able to specify the magnitude of those costs.

(d) Provision C.3/C.11/C.12 Costs.

(i) As part of the City's Green Infrastructure program, the City adopted a resolution authorizing the adoption of a Green Infrastructure Plan, as required by Provision C.3.

The City is seeking to retain a consultant for the preparation of some of the tasks listed in the Framework for Green infrastructure Plan Development ("Framework") and has budgeted **\$15,000** to support such assistance.

(ii) The City has Provisions C.11 and C.12 are as follows:

a. On January 12, 2015, the City awarded a contract for the City's first green street infrastructure improvement project to Star Construction in the amount of \$877,502.10. The final construction cost was \$1,029,998.50.

Total project related costs are as follows:

Design Fees	\$230,911
Construction Contract (Star Construction, Inc.)	\$1,029,998.50
Utilities	\$45,238.39
Construction Management (City Staff)	\$99,692.41
TOTAL	\$ 1,405,840.30

b. In September 2015, the City approved a contract award for the Granite Rock Company to complete improvements related to the South Decoto Green Streets Project. The South Decoto Green Streets Project is a sustainable redevelopment project in the Decoto District that aims to create 'green' infrastructure that mimics natural systems to reduce reliance on essential city functions such as storm drainage. The project created tree-lined, pedestrian-friendly green streets, thereby contributing to overall quality of life while reducing water and air pollution, increasing groundwater recharge, and reducing water consumption.

Project related costs to date are as follows:

Design Engineering & Monitoring Contract (Bellecci and Associates)	\$ 548,990
Construction Contract (Granite Rock Company)	\$ 2,781,587
Construction Inspection Services Contract (Vali Cooper & Associates)/Material Testing Contract (Applied Materials)	\$ 163,722
Construction Staking Contract (Bellecci & Associates)	\$18,960
Estimated Project Management/Administration (City Staff)	\$ 75,000
Water Service Connection – ACWD Connection Fees	\$ 30,453
TOTAL	\$ 3,618,712

c. In July, 2016, the City approved a contract award for the Granite Rock Company to complete improvements related to the H Street-Green Street Improvements Project. The City has not yet completed a final total accounting of actual costs; however, the projected total related costs are as follows:

Construction Contract (Granite Rock Company)	\$3,001,180.00
Construction Contingency (5% of Construction Contract)	\$150,000.00
Inspection/Material Testing Services (Ghirardelli Associates)	\$132,039.60
Estimated Project Management/Administration (City Staff)	\$40,800.40
Alameda County Water District – Water Service Fees	\$50,000.00
Design Contract (WRECO) – Awarded by City Council 9/23/14	\$499,980.00
TOTAL	\$3,874,000.00

d. In order to meet the PCB and Mercury load reduction goals for 2040, the City has projected a cost of an additional \$72.5 million – amounting to **\$3 million** per year for the next 23 years.

e. In addition to the aforementioned costs, the City has paid additional costs to the Alameda Countywide Clean Water Program (“ACCWP”). For FY15/16 and FY 16/17, Union City paid \$106,466 to ACCWP each year to support MRP 2 compliance actions. I have been in contact with Jim Scanlin, an Associate Environmental Compliance Specialist working with the ACCWP. He provided the breakdown of the City’s share of the County’s costs for the state mandated costs at issue in this Test Claim. I believe this information to be true and correct. Those costs are as follows:

Task	FY	Program Cost	Union City Share (5.31%)
C3, 11 and 12 GIS Development: Psomas (Through May)	16/17	\$42,752	\$2,270
C3, 11 and 12 GIS Support: Geosyntec (Through April)	16/17	\$29,008	\$1,540
Green Infrastructure Plan Development: Horizon (Through April)	16/17	\$29,500	\$1,566
TOTAL 16/17			\$5,377
Green Infrastructure Plan Development: Horizon	15/16	\$40,000	\$2,124
Trash mapping GIS: EOA	15/16	\$25,000	\$1,328
TOTAL 15/16			\$3,452

(e) Dates on Which Costs Were First Incurred During the Permit Term.

Most of the state mandated costs assessed in this declaration are direct costs and/or major expenditures and efforts that comprise the majority of the relevant City expenditures and that are most readily ascertainable. For the purposes of determining the precise date that Union City *first* incurred increased costs as a result of the new activities and modified existing activities mandated by MRP2, I determined that these first incurred costs were typically indirect costs from staff actions. I determined the value of my time to be \$207/hour.

(i) Provisions C.10.a and C.10.b. Costs were first incurred after the effective date of MRP2 on January 25, 2016, when I received and reviewed the Draft Template for Provision C.10 of the Annual Report from the Bay Area Stormwater Management Agencies Association (BASMAA) in preparation for the planning, coordination, and implementation of trash load reduction strategies designed to satisfy Provisions C.10.a and C.10.b. My review of the

1 documentation and preparation of responsive comments took approximately 60 minutes, so this
2 activity cost the City \$207.00

3 (ii) Provision C.3.j. Costs were first incurred after the effective date of MRP2
4 on February 10, 2016, when I received and reviewed an agenda for the first Green Infrastructure
5 Working Group meetings organized by the Clean Water Program and BASMAA and attended by
6 other Working Group members from the Clean Water Program. I attended three of these
7 meetings, during which we began developing a Framework for Green Infrastructure Plan
8 Development for meeting the requirements set forth in Provisions C.3.j. Review of the agenda
9 took approximately 15 minutes, costing the City \$51.57. Attending the meetings took
10 approximately nine hours of my time, costing the City \$1,863.00.

11 (iii) Provisions C.11 and C.12. Costs were first incurred after the effective date
12 of MRP2 on January 29, 2016, when I received and began reviewing the draft agenda from the
13 Clean Water Program in preparation for a PCB Reduction Strategy Working Group meeting.
14 During the meeting, which took place on February 2, 2016 and was attended by other Working
15 Group members from the Clean Water Program, we began the process of strategizing activities to
16 meet the PCB and Mercury load reduction goals through green infrastructure set forth in
17 Provisions C.11 and C.12. The PCB Reduction Strategy Working Group is also supported by the
18 Clean Water Program and BASMAA. Review of the agenda for the first meeting took
19 approximately 15 minutes, costing the City \$51.57. Attendance of this meeting took
20 approximately three hours of my time, so this activity cost the City \$621.00.

21 (f) Total Costs.

22 (i) Based on the foregoing, and excluding for the sake of simplicity the indirect
23 costs described for timing purposes in paragraph 8(e) above, the City's aggregate costs incurred
24 for FY 14/15, FY 15/16, and FY 16/17 in order to comply with MRP 2 Provisions C.3, C.10, and
25 C.11/C.12 are estimated to be **\$9,454,799.39**.

26 (ii) Attached hereto as Exhibit A are true and correct copies of documents
27 related to the costs discussed in my declaration that I obtained from City records.

28

1 10. I am confident from my own knowledge of the MRP 2 and the MRP 1 and the City
2 of Union City's stormwater program that the actual and/or estimated costs resulting from the MRP
3 2 mandates at issue in this Test Claim will exceed one thousand dollars (\$1,000).

4 11. With the exception of the partial funding source set forth below, I am not aware of
5 any state or federal funds that will be available to pay for these increased costs.

6 (a) The Proposition 84 – Urban Greening for Sustainable Communities Grant
7 Program provided \$724,000 for the Decoto Green Street Project. The City received \$3 million
8 from the Proposition 84 Storm Water Grant Program grant from the State Water Resources
9 Control Board to implement similar improvements via the South Decoto Green Streets Project
10 (Phase II). The City also received another \$3 million in Prop 84 Storm Water Grant funds to
11 install green infrastructure along 10 contiguous blocks along an arterial (H St. between 4th and
12 12th Streets) in the Decoto District.

13 10. I am not aware of any other local or non-local agency funds that are or will be
14 available to pay for these increased costs. The City has a Clean Water Fund, which obtains
15 revenue from property tax assessments and a solid waste franchise surcharge. The City has no
16 authority to increase these revenue sources without complying with Proposition 218. Thus, the
17 City does not have authority to increase these fees – only the voters have that authority.
18 Furthermore, the money from the Clean Water Fund is already consumed by existing stormwater
19 compliance costs and is insufficient to cover increased activities required by MRP2.

20 11. The City is not confident that it will be able to avail itself of future grant
21 opportunities. Available grant opportunities that would likely support the City's stormwater
22 programs have a dollar for dollar matching requirement, which constitutes a steep increase from
23 the 30 percent matching requirements for Proposition 84 Storm Water Grant funds. The City
24 therefore has no grant applications pending. Furthermore, multiple jurisdictions must compete for
25 limited funding sources, creating stiff competition among municipalities.

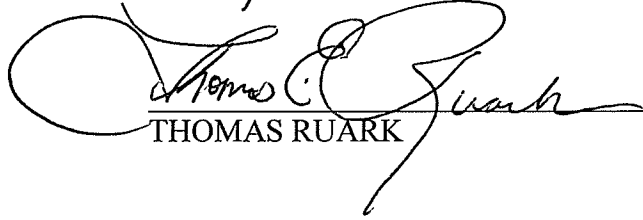
26 12. I have personally reviewed the costs provided in this Declaration and I am satisfied
27 that the information is accurate and was correctly compiled according to my instructions.

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

Executed on August 14, 2017, at Union City, California.



THOMAS RUARK

2846658.1

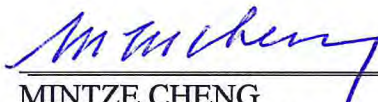
EXHIBIT A



34009 ALVARADO-NILES ROAD
UNION CITY, CALIFORNIA 94587
T 510.675.5305 F 510.489.9468

Date: January 19, 2016
To: FINANCE DEPARTMENT
From: PUBLIC WORKS
Subject: **PROGRESS PAYMENT APPROVAL - 1
CITY PROJECT NO. 15-18**

Project: CPS Installations
Project No.: 15-18
Contractor: United Storm Water, Inc.
Purchase Order No.: 1027084
Payment Amount: \$ 47,354.50



MINTZE CHENG
DIRECTOR OF PUBLIC WORKS

CITY OF UNION CITY
CPS INSTALLATIONS
CITY PROJECT NO. 15-18

Date: 1/14/2016
Purchase Order No. 1027084
Progress Payment No. 1
For Period Ending: 10/31/15

Contractor: United Storm Water, Inc.
Address: 14000 East Valley Blvd
City of Industry, CA 91746-2801

RECORD OF CHANGE ORDERS	
Initial Contract Amount:	\$ 99,994.52
Additional Quantities:	
Reduced Quantities:	
Total C.O. No. 1	
Total C.O. No. 2	
TOTAL PROJECT AMOUNT:	\$ 99,994.52

CHANGE ORDERS								
C.O. No.	DESCRIPTION	UNIT	EST. QTY	UNIT PRICE	TOTAL ESTIMATE	PP FINAL	TO DATE	TOTAL AMT.
						QUANTITY		

TOTAL AMOUNT DUE UNDER CHANGE ORDER ITEMS	\$ -
TOTAL AMOUNT DUE UNDER CONTRACT ITEMS	\$ 47,354.50
TOTAL AMOUNT	(Contract Items + Change Orders) \$ 47,354.50
TOTAL SALES TAX (\$55,637 of total subject to sales tax)	\$ 2,642.76
LESS 5% RETENTION	\$ 2,499.86
TOTAL AMOUNT DUE	\$ 47,497.40
LESS PREVIOUS PAYMENTS	
AMOUNT OF PAYMENT	\$ 47,497.40

PREPARED BY: MURRAY CHANG *Murray Chang* 1/14/16 CHECKED BY: *[Signature]*

CONTRACTOR: UNITED STORM WATER, Inc. *[Signature]*

BASE BID

ITEM No.	DESCRIPTION	UNIT	EST. QTY	UNIT PRICE	Total Estimate	PP #1	TO DATE	TOTAL AMOUNT
1	Technician - Installation	407	407	\$ 66.00	\$ 26,862.00	0.5	50.00%	\$ 13,431.00
2	Stakebed Trk W/ Liftgate	407	407	\$ 30.00	\$ 12,210.00	0.5	50.00%	\$ 6,105.00
3	Connector Pipe Screens (CPS)	205	205	\$ 271.40	\$ 55,637.00	0.5	50.00%	\$ 27,818.50

TOTAL AMOUNT DUE UNDER CONTRACT ITEMS \$ 47,354.50



14000 East Valley Blvd. • City of Industry, CA 91746-2801
 (877) 71-STORM • Fax (626) 961-3166

INVOICE

UNITED STORM WATER, Inc.
Protecting Our Water Resources

INVOICE
CUSTOMER
 Service Contract
 Project Name

SW30828
UNC110000

BILL TO ADDRESS
 CITY OF UNION CITY
 34650 7TH ST.
 UNION CITY, CA 94587

JOB SITE ADDRESS
 CITY OF UNION CITY
 34650 7TH ST.
 UNION CITY, CA 94587

SCOPE OF WORK : CPS INSTALLATIONS

DATE
 10/31/2015

CONTRACT/P.O.#
 PROJ NO. 15-18

SALES CODE
 TERRY FLURY

NET TERMS:
 NET 30

MANIFEST #

QTY.	UNIT	DESCRIPTION	DATE	W.O.#	UNIT PRICE	TOTAL AMT.
407	HR	TECHNICIAN - INSTALLATION	10/11/2015	SWO38195	66.00	26,862.00
407	HR	STAKEBED TRK W/ LIFTGATE	10/11/2015	SWO38195	30.00	12,210.00
205	EACH	CONNECTOR PIPE SCREENS (CPS)	10/11/2015	SWO38195	271.40	55,637.00

SUBTOTAL: 94,709.00
TOTAL SALES TAX: 5,285.52
TOTAL: 99,994.52



34009 ALVARADO-NILES ROAD
 UNION CITY, CA 94587
 (510) 471-3232

DATE
10/20/2015

PO NUMBER
1027084

VENDOR: 044599
 UNITED STORM WATER INC
 14000 E VALLEY BLVD
 CITY OF INDUSTRY, CA 91746

SHIP TO: PUBLIC WORKS ADMIN
 34009 ALVARADO-NILES RD
 UNION CITY, CA 94587

FOB Point:
 Terms: No terms

Req. No: 1027597
Dept: PUBLIC WORKS ADMINISTRATION
Contact: LATHUNG, NANCY
Confirming? No

Req Del Date:
Contract No:
Special Inst:

Quantity	Unit	Description	Unit Price	Ext. Price
		BLANKET PURCHASE ORDER INSTALL FULL TRASH CAPTURE DEVICES IN 205 STORM DRAIN CATCH BASIN, PROJECT #15-18		99,994.52

BILL TO: CITY OF UNION CITY
 ATTENTION: FINANCE DEPARTMENT
 34009 ALVARADO-NILES ROAD
 UNION CITY, CA 94587

SUBTOTAL	99,994.52
TAX	0.00
FREIGHT	0.00
TOTAL	99,994.52

Account Number	Amount	Account Number	Amount
E 2580-3199-91518-54111	99,994.52		

Mark E...
 Authorized Signature

VENDOR COPY

[Signature]
 Authorized Signature (over \$25,000)



Presents a Proposal Summary



2100 Plus

Combination Single Engine Sewer Cleaner with Positive Displacement Vacuum System Mounted on a Heavy Duty Truck Chassis

For

Union City 2110+ Peterbilt Chassis



NJPA Contact #022014-FSC

www.njpacoop.org

List Summary

Order Qty	Part Number	Description
1	2110P-16	2100 Plus PD, 16" Vacuum, 10 yrd Debris, Combo
1	2014PSTD	1000 Gallons STD (10 yrd)
1	5002PA	80 GPM/2500 PSI in lieu of 60 GPM/2000
1	010PSTD	48w x 22h x 24d Curbside Toolbox
1	011PSTD	Aluminum Fenders
1	012PSTD	Mud Flaps
1	014PSTD	Electric/Hydraulic Four Way Boom
1	016PSTD	Color Coded Sealed Electrical System
1	018PSTD	Remote Pendant Control With 35' Cord
1	019PSTD	Vansco Electronic Package
1	020PSTD	Double Acting Hoist Cylinder
1	025PSTD	Handgun Assembly w/35' x 1/2" Hose w/Quick Disconnects
1	026PSTD	Ex-Ten Steel Cylindrical Debris Tank
1	030PSTD	Flexible Hose Guide
1	032PSTD	(3) Nozzles with Carbide Inserts w/Rack
1	045PSTD	Suction Tube Storage - 4 Pipe
1	046PSTD	1" Nozzle Pipe
1	048PSTD	1" X 10' Leader Hose
1	1001PSTD	Flat Rear Door w/Hydraulic Locks
1	1005PSTD	Dual Stainless Steel Float Shut Off System
1	1016PSTD	SS Microstrainer Prior to Blower
1	1024PSTD	Debris Body Vacuum Relief System
1	1031PSTD	Debris Deflector Plate
1	1032PSTD	48" Dump Height
1	2022PSTD	Additional Water Tank Sight Gauge
1	2023PSTD	Liquid Float Level Indicator
1	5010PSTD	Rodder System Accumulator - Jack Hammer on/off Control w/ manual valve
1	5011PSTD	3" Y-Strainer @ Water Pump w/3" Drain Valve
1	5012PSTD	Performance Package
1	5014PSTD	1" Water Relief Valve
1	5015PSTD	Midship Handgun Coupling
1	5022PSTD	Side Mounted Water Pump
1	6005PASTD	Additional Hose Footage Counter, Rear of Hose Reel, Included w/Digital Counter
1	6007PSTD	Hose Reel Manual Hyd Extend/Retract
1	6009PSTD	Hose Reel Chain Cover
1	6020PBSTD	Hydraulic Extending 15", Rotating Hose Reel, 1" x 800' Capacity
1	6017PSTD	Hydraulic Tank Shutoff Valves
1	7001PSTD	Tachometer/Chassis Engine w/Hourmeter
1	7003PSTD	Water Pump Hour Meter
1	7004PSTD	PTO Hour Meter
1	7007PSTD	Tachometer & Hourmeter/Blower
1	8000PSTD	Circuit Breakers
1	8025PSTD	LED Lights, Clearance, Back-up, Stop, Tail & Turn
1	9002PSTD	Tow Hooks, Front
1	9002PSTD	Tow Hooks, Rear
1	9003PSTD	Electronic Back-Up Alarm
1	S390ASTD	8" Vacuum Pipe Package

1	S560STD	Emergency Flare Kit
1	S590STD	Fire Extinguisher 5 Lbs.
1	1003P	Debris Body Washout
1	1004P	Debris Body Load Limit Alarm functionally tied to Debris Body Vacuum Relief
1	1007P	6" Rear Door Butterfly Valve, 3:00 position
1	1009PD	Full Rear Door Swinging Screen
1	1012PA	6" Decant System w/Knife Valve, Streetside
1	1014P	Centrifugal Separators (Cyclones)
1	1015P	Folding Pipe Rack, Curbside
1	1015PA	Folding Pipe Rack, Streetside
1	1022P	Rear Door Splash Shield
1	2011PSTD	3" Y-Strainer at Passenger Side Fill, in lieu of 2", with 25' Fill Hose
1	3015PA	Hot Shift Blower Drive (automatic Transmission)
1	3019P	Digital Water Pressure Gauge
1	4014P	180 deg. 5 x 5 Extendable/Telescoping Boom
1	4006P	Front Joystick Boom Control
1	4010P	Boom Hose Storage, Post for 5 x 5 Boom
1	4011PB	Bellypack Wireless Controls, including hose reel controls
1	4013PA	Rotatable Boom Inlet Hose, 5 x 5 Boom
1	5015P	Handgun Couplers, Front and Rear
1	5021P	Hydro Excavation Kit/Retract Reel w/50' Hose and Nozzle
1	6002PB	600' x 1" Piranha Sewer Hose 2500 PSI in lieu of STD
1	6004PB	Hose Wind Guide (Dual Roller), Auto, Indexing with Pinch Roller
1	6005PD	Digital Hose Footage Counter
1	6011P	Handgun Hose Reel w/Spring Retract
1	6019P	Rodder Pump Drain Valves
1	8001PK	Rear Mounted Directional Control Arrow Board, Whelen Traffic Advisor, LED, One-Piece, 5' Long
1	8002P	Hand Light w/Bumper Plug
1	8002PA	Waterproof, Rechargeable, Wireless, Handheld, LED Spot Light w/12V Charger and Plug
1	8004PC	Revolving LED Beacon, Rear Federal Signal SLR Series, Amber
1	8013P	Rear Beacon Limb Guard
1	8020PA	DOT 3 Lighting Package, 6 Whelen Strobe Lights
1	8027P	LED Mid-Ship Turn Signals
1	8028P	Worklights (2), LED, 5 x 5 Boom
1	8029P	Worklights (2), LED, Rear Door
1	8029PA	Worklight, LED, Operators Station
1	8029PB	Worklight, LED, Hose Reel Manhole
1	8029PC	Worklight, LED, Curb Side
1	8029PD	Worklight, LED, Street Side
1	9021PB	Camera System, Front, Rear and Both Sides
1	9023P	Safety Cone Storage Rack - Drop in Style
1	9070PA	Toolbox, Front Bumper Mounted, 16 x 12 x 18 w/(2) LED Side Markers
1	9070PB	Long Handle Tool Storage
1	9074PA	Toolbox, Driver Side Subframe, 18w x 24h x 24d
1	P112STD	Module Paint, DuPont Imron Elite - Sanded Primer Base

1	P124	Vactor 2100 Plus Body Decal, Multi-Colored
1	LOGO-APPL.	Vactor/Guzzler Logos - Applied
1	500655B-30	Vactor Standard Manual and USB Version - 1 + Dealer
1	31096D-30	1" x 25' Leader Hose Assembly
2	41280-30	(2) 3" Y-Strainer Screen
1	43516-30	(1) 1" Root Cutter Kit
1	43517-30	(1) 6" Spiral Saw Blade
1	43518-30	(1) 8" Spiral Saw Blade
1	43519-30	(1) 10" Spiral Saw Blade
1	43520-30	(1) 12" Spiral Saw Blade
1	43521-30	(1) 15" Spiral Saw Blade
1	R18099	5 Boom Lights 4 up 1 Down
1	R20909	All Vactor Switches in Dash
1	R18102	Whelen tool Box Lighting
1	R28413	Wheel Chocks and Storage
1		Mid-West Lube System Body Only
1	Chassis- Mod	Chassis Modifications Charges
1	PSPS370A-E	Customer Supplied Chassis, Single Axle, 2018 Peterbilt 348 SBA, 370 HP, Auto, 46,000 GVWR, 2013 Emissions
1	Freight Charges	

Price FOB Union City Ca

Tax @9.750%

Total NJPA Price including Tax

\$394,007.81
\$38,415.76
\$432,423.57

THE PROPERTY HEREIN IS GUARANTEED BY MANUFACTURER'S WARRANTY ONLY AND SELLER MAKES NO WARRANTY EXPRESSED OR IMPLIED, OF MERCHANTABILITY OR OTHERWISE, OR OF FITNESS FOR ANY PARTICULAR PURPOSE, THAT EXTENDS BEYOND THE ABOVE DESCRIPTION OF THE EQUIPMENT.

NOTE: Price is good for 5-5-2017 30 Days. Cost increases due to the addition of Government mandated safety or environmental devices incurred after the date of this proposal, will be charged to you at our cost. Proof of such costs, if any, will be documented.

TAXES: SALES TAX applicable at time of delivery will be shown on our invoice. FEDERAL EXCISE TAXES, if applicable, will require payment unless a properly executed Exemption Certificate is submitted.

DELIVERY: 120-150 ARO **TERMS:** Net 10 or Approved Lease

If you have any questions please give me a call at (916) 947-0986.

Sincerely,

Michael Kennedy

Michael Kennedy
Sales Representative



Agenda Item

DATE: MARCH 28, 2017

TO: CITY COUNCIL

FROM: MINTZE CHENG, PUBLIC WORKS DIRECTOR

SUBJECT: ADOPT THE CITY OF UNION CITY'S FRAMEWORK FOR GREEN INFRASTRUCTURE PLAN DEVELOPMENT, City Project 17-16.

In order to be in compliance with the provisions of the reissued Municipal Regional Stormwater Permit (MRP2) the City is required to adopt a Green Infrastructure Plan by June 30, 2019. The first step toward adoption of this plan is for the City to adopt the Framework for Green Infrastructure Plan Development by June 30, 2017. Tonight staff requests that City Council adopt the attached Framework.

BACKGROUND:

In order to be in compliance with Provisions C.3j, C.11 and C12 of the reissued Municipal Regional Stormwater Permit (MRP2) adopted by the San Francisco Bay Regional Water Quality Control Board on November 19, 2015 (Order No. R2-2015-0049). The City of Union City is required to prepare a Green Infrastructure Plan for the inclusion California Native and Bay Friendly plants features into appropriate projects on public and private lands to address the storm water quality impacts and pollutants from of the paving of roadways and parking lots. The said Green Infrastructure Plan shall meet the following milestones:

1. The City to adopt a framework for the Green Infrastructure Plan by June 30, 2017.
2. The Green Infrastructure plan must be approved by June 30, 2019.
3. Said Green Infrastructure plan must be submitted with the City's Annual Stormwater Report in September 2019.

The City is a member agency of the Alameda County Clean Water Program. In order to be in compliance with the MRP2, a Framework for Green Infrastructure Plan Development has been prepared and recommended to the member agencies after several review by the Green Infrastructure Technical Advisory Group.

DISCUSSION:

The attached Framework for Green infrastructure Plan Development is organized as follows:

- Section 1: Purpose of the Plan

- Section 2: Municipal Stormwater Permit Deadlines
- Section 3: Specific Tasks for Plan Development
 - Identify Projects
 - Develop Tracking Procedures
 - Incorporate Guidelines
 - Update Planning Documents
 - Evaluate Funding Sources
 - Training and Outreach
- Section 4: Timeframe for Plan Development
- Section 5: Staffing Assignments
- Section 6: Budget

Staff anticipates retaining consultant's assistance to prepare some of the tasks listed in Section 3 above and requests a budget of \$15,000 from City's Clean Water Fund Balance for the said purposes.

FISCAL IMPACT:

In order to prepare the Green Infrastructure Plan a budget of \$15000.00 should be set aside from the Clean Water Funds (Fund 2580). Once City Council approves the proposed Framework for Green Infrastructure Plan Development, funding can be made available from the existing Public Works Clean Water Program O&M budget. There is no Council action required since City Manager can authorize fund transfer within same fund. A Fund Transfer form is prepared in Attachment B for Council information.

RECOMMENDATION

It is recommended that the City Council adopt the Framework for Green Infrastructure Plan Development to prepare said Plan.

Prepared by:
Thomas Ruark, City Engineer

Submitted by:
Mintze Cheng, Public Works Director

Approved by:
Antonio Acosta, City Manager

Attachments

- A. The City of Union City's Framework for Green Infrastructure Plan Development
- B. Proposed Fund Transfer



Agenda Item

DATE: 6/14/2016

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: MINTZE CHENG, PUBLIC WORKS DIRECTOR

SUBJECT: A RESOLUTION TO ACCEPT WORK FOR DECOTO GREEN STREET PROJECT; CITY PROJECT NO. 11-01

Public Works staff recommends City Council for a supplemental appropriation in the amount of \$87,000 for the Decoto Green Street Project and accepting work from Star Construction, Inc., for the construction cost of \$1,029,998.50 and releasing of retention in the amount of \$51,499.92, thirty-five days after project acceptance.

BACKGROUND

Star Construction, Inc. of San Bruno, CA, has completed the Decoto Green Street Project, which consisted of making green street infrastructure improvements along C St, between 6th St. and 9th Street. The contractor has installed all items called for on the plans such as the rain gardens, pervious pavers, storm drain system, irrigation system, landscaping and interpretive signage.

DISCUSSION

On January 12, 2015, City Council awarded the contract for City's first green street infrastructure improvements project to Star Construction in the amount of \$877,502.10. The final construction cost is \$1,029,998.50, which is \$152,496.40 or approximately 17% above the original contract. The increase in cost was primarily due to the overrun of quantities shown in the bid schedule.

The total budget available for this project (including design, outreach, construction, post-construction monitoring, and City's in-kind contribution) is \$1,358,900. The State Grant funding (Prop. 84) is for \$724,000 with the remaining \$634,900 to be funded from the City's Allied Waste Vehicle Impact Fund (Fund 2620) in the amount of \$361,900 and Measure F Fund (Fund 2544) in the amount of \$273,000.

The budget was expected to be expended as follows: design fees (\$230,911), construction contract (\$877,502.10), construction contingency (\$87,750.21), utilities (\$38,000), and construction management by staff (\$124,736.8), for a total expenditure of \$1,358,900.

The actual expenditure was as follows: design fees (\$230,911), construction contract (\$1,029,998.50), utilities and other miscellaneous expenses such as construction staking and compaction testing (\$45,238.39), and

construction management by staff (\$99,692.41), for a total expenditure of \$1,405,840.30.

The difference between the overall actual expenditure of \$1,405,840.30 versus the planned expenditure of \$1,358,900 results in a deficit of \$46,940.30 (rounding to \$47,000) in the project budget. In addition, during last budget preparation (2014/15), Measure F fund was short of cash flow so this project fund was reduced by \$40,000. It was planned to bring the project funding back up when there is positive fund balance. Thus, the total project shortfall is at \$87,000.

The contractor has filed a claim with the City. City Attorney and City staff met with the contractor, his attorney and their engineering expert to respond to the validity of the claim. Since the meeting, the contractor has changed his attorney and the new attorney is in contact with the City Attorney. City Attorney has advised City staff to recommend project acceptance by City Council and the release of retention per California Contract Code with the understanding that the claim will need to be handled separately.

Staff recommends City Council appropriate additional \$87,000 from Measure F Fund (Fund 2544) to close the funding gap.

FISCAL IMPACT

It is recommended that City Council to approve a supplemental fund in the amount of \$87,000 from Measure F Fund (Fund 2544) to the project for the said project acceptance. Sufficient funds are available in the Measure F Fund balance for the requested action.

RECOMMENDATION

It is recommended that the City Council adopt the attached resolution appropriating supplement fund in the amount of \$87,000 from Measure F Fund balance and accept the Decoto Green Street Project, City Project No. 11-01 from Star Construction, Inc.

Prepared by:

Farooq Azim, Principal Civil Engineer

Submitted by:

Mintze Cheng, Public Works Director

ATTACHMENTS:

Description	Type
<input type="checkbox"/> Resolution	Resolution
<input type="checkbox"/> Attachment to Reso - Appropriation Form	Attachment
<input type="checkbox"/> Exhibit B - Notice of Completion	Exhibit

RESOLUTION NO.

**RESOLUTION OF THE CITY COUNCIL OF THE CITY OF UNION CITY
ACCEPT WORK FOR THE DECOTO GREEN STREET PROJECT
CITYPROJECT NO. 11-01**

WHEREAS, Star Construction, Inc. has successfully completed the improvements for the Decoto Green Street Project, per contract requirements; and

WHEREAS, the work has been completed to the satisfaction of the City Engineer; and

WHEREAS, said project is funded by the State Grant funding (Prop. 84) in the amount of \$724,000, City's Allied Waste Vehicle Impact Fund (Fund 2620) in the amount of \$361,900 and Measure F Fund (Fund 2544) in the amount of \$273,000, for a total budget of \$1,358,900; and

WHEREAS, the construction budget was exceeded by approximately \$47,000 and the allocated Measure F funds in the 2014/15 budget had a cash flow deficit which had to be reduced by \$40,000 for a total project short fall of \$87,000; and

WHEREAS, Staff recommends City Council appropriate additional \$87,000 from Measure F Fund (Fund 2544) to close the funding gap and sufficient funds are available in the said fund balance.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Union City does hereby appropriate additional \$87,000 to the Decoto Green Street Project from City's Measure F Fund (Fund 2544) fund balance and

BE IT FURTHER RESOLVED that the City Council of the City of Union City accepts the improvements in the final amount of \$1,029,998.50 for the Decoto Green Street Project; City Project No. 11-01; and

BE IT FURTHER RESOLVED that the City Clerk of the City of Union City be directed to record the Notice of Completion with the Office of the County Recorder of Alameda County, California; and

BE IT FURTHER RESOLVED that the City Council of the City of Union City does hereby authorize the City to make a final retention payment in the amount of \$51,499.92 to Star Construction, Inc. for the completion of improvements of the Decoto Green Street Project; Project No. 11-01 in accordance with the contract requirements file at the Office of the City Engineer.

Route to Finance Department

JE # _____

Posted _____

REQUEST FOR BUDGET TRANSFER OR SUPPLEMENTAL APPROPRIATION

Nature of adjustment:

Inter-account Transfer

Additional Appropriation

Approved by Council Action/Resolution # X

INCREASE BUDGET OF THIS ACCOUNT		DECREASE BUDGET OF THIS ACCOUNT	
Account Number	Amount	Account Number	Amount
2544-3199-91101 Decoto - Green Street	\$ 87,000.00	Fund 2544 (Measure F) Fund Balance	\$ 87,000.00

Reason for request:
 Actual vs. planned construction expenditure resulted in a deficit of \$ 47,000.00. Also, in 2014/15 budge cycle, measure F fund was short of cash flow so this project fund was reduced by \$ 40,000.00 for a total short fall of \$ 87,000.00

REQUIRED: IF A CAPITAL BUDGET IS BEING DECREASED, EXPLAIN HOW THE DECREASE WILL IMPACT THE PROJECT (ELIMINATE, POSTPONE, REDUCE SCOPE, NO IMPACT, OTHER)



DATE: JULY 26, 2016

TO: CITY COUNCIL

FROM: MINTZE CHENG, PUBLIC WORKS DIRECTOR

SUBJECT: AWARD CONTRACTS FOR H STREET GREEN STREETS PROJECT AND CONSTRUCTION INSPECTION SERVICES; CITY PROJECT NO. 14-15

Three (3) bids were received and opened on June 28, 2016. The apparent low bidder was Granite Rock Company of San Jose, California with a total base bid amount of \$3,001,180.00. Public Works staff recommends City Council awarding the construction contract to Granite Rock Company. In addition to the construction contract, Public Works staff recommends award of a contract for construction inspection services to Ghirardelli Associates in the amount of \$132,039.60.

BACKGROUND:

The H Street-Green Street Improvements Project is a sustainable redevelopment project that will create green infrastructure that mimics natural systems to provide essential storm drainage function and contributes to overall quality of life while reducing water and air pollution, increasing groundwater recharge and reducing water and energy consumption. The project also proposes to create a tree-lined, pedestrian-friendly roadway on H Street from 4th Street to 12th Street. This project will continue the green street improvements on H Street that were recently installed from 12th Street to 15th Street as part of the South Decoto Green Street project.

The project will modify approximately 10 blocks of H Street between 4th Street and 12th Street. The project includes intersection and mid-block improvements to capture, retain, and treat storm water runoff and to enhance the pedestrian experience. See Exhibit B, Project Location Map.

The intersection improvements will consist of storm water filtration planters, sidewalk bulb-outs and specially marked crosswalks. The bulb-outs will also serve to shorten crosswalk lengths, thereby enhancing pedestrian safety and slowing traffic.

The mid-block improvements will consist of installing permeable block pavers at the parking lanes for flow detention which will also reduce peak flow rates and peak volumes by

increasing infiltration into the soils and filter runoff to improve water quality before allowing storm water to enter the existing storm drain system, which outfalls to Alameda Creek.

New street trees and other native landscaping will be planted along the length of the streets, within and adjacent to the bio-filtration planters, to provide natural cooling, air and water purification, and enhanced natural aesthetics. This is about a six-month construction project.

DISCUSSION:

Bids were opened on June 28, 2016 with three (3) contractors submitting bids to the project. The project was bid in three segments consisting of the Base Bid (improvements from 5th Street to 11th Street, Additive Alt. 1 (improvements from 4th Street to 5th Street) and Additive Alt. 2 (improvements from 11th Street to the Railroad crossing). The bid summary sheet is attached as Exhibit A.

Due to funding constraints, staff recommends that only the Base Bid segment be awarded. The total low bid of \$3,001,180.00 (Base Bid) from Granite Rock Company is \$148,820.00 or approximately 5% below the engineer's estimate of \$3,150,000.00. Granite Rock Company is the contractor working on the South Decoto Green Streets project. They have been providing quality work and have been very responsive in dealing with City staff and the public. Thus, staff recommends awarding the base bid contract to Granite Rock Company.

In addition to the construction contract, Public Works recommends to retain a full-time construction inspector to monitor work progress and quality control. City staff continues assuming the project management role to control cost. The City received proposals from (2) firms – Vali Cooper & Associates and Ghirardelli Associates. After reviewing the proposals and interviewing the proposed inspectors, city staff has selected Ghirardelli Associates to perform this work. Ghirardelli Associates has contracted with our City in the past and staff is pleased with their past performance. Thus, staff recommends awarding the contract in the amount of \$132,039.60 for inspection services to Ghirardelli Associates.

In addition to the daily inspection services, it is important to set aside contingency funds for potential change orders. Staff recommends a \$150,000 (5%) contingency being established in the project. It is also important that change order decisions be made quickly so as not to delay the contractor's operations and expose the City to delay damage. It is, therefore, proposed that the City Manager be given authority to approve contract change orders within this contingency, provided the Council is informed at the next available Council meeting of any change orders in excess of \$75,000.

Thus, the estimate of project design and construction related costs are as follows:

Construction Contract (<u>Granite Rock Company</u>)	\$3,001,180.00
Construction Contingency (5% of Construction Contract)	\$150,000.00
Inspection/Material Testing Services (Ghirardelli Associates)	\$132,039.60
Estimated Project Management/Administration (<u>City Staff</u>)	\$40,800.40
Alameda County Water District – Water Service Fees	\$50,000.00
Design Contract (<u>WRECO</u>) – Awarded by City Council 9/23/14	\$499,980.00
TOTAL	\$3,874,000.00

The original approved budget for this project (including design, outreach, construction, post-construction monitoring, and City’s in-kind contribution) is \$3,750,000.00. The State Grant funding (Prop. 84) is for \$3,000,000 with the remaining \$750,000 from a combination of the City’s Allied Waste Vehicle Impact (Fund 2620) in the amount of \$520,000, County Measure F Vehicle Registration Fee Fund (Fund 2544) in the amount of \$230,000. This leaves a shortfall of \$124,000. Staff identified an inter-fund transfer within Measure F Fund from our annual Overlay Program to the said Project for the said \$124,000. Since this transfer is within City Manager’s authorization, this is just for Council information and no Council action required.

FISCAL IMPACT:

Project funding is budgeted through a combination of State Prop. 84 Grant (Fund 4100 of \$3,000,000), City’s Allied Waste Vehicle Impact Fee (Fund 2620 of \$520,000) and County Measure F Vehicle Registration Fee (Fund 2544 of \$354,000). There are sufficient funds available for the requested construction contract and inspection services award.

Environmental Review:

This project received a Notice of Exemption (NOE) and was filed with the County Clerk on March 9, 2015 under CEQA review.

RECOMMENDATION:

Public Works Department recommends that the City Council adopt the attached resolution awarding a contract to Granite Rock Company of San Jose in the amount of \$3,001,180.00 for the construction of the H Street Green Streets Project, City Project No. 14-15 and awarding a contract for inspection services to Ghirardelli Associates in the amount of \$132,039.60.

Prepared by: Michael Renk, Civil Engineer III

Submitted by: Mintze Cheng, Public Works Director

Approved by: Antonio Acosta, City Manager

- Exhibits
- A. Bid Summary
 - B. Project Location Map
 - C. Cost Proposal from Ghirardelli Associates



Agenda Item

DATE: JANUARY 10, 2017

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: MINTZE CHENG, PUBLIC WORKS DIRECTOR

SUBJECT: ACCEPTANCE OF WORK FOR SOUTH DECOTO GREEN STREETS PROJECT, CITY PROJECT NO. 11-29

The Contractor, Granite Rock Company, has completed all improvements related to the South Decoto Green Streets Project. All the necessary paperwork and reports have been submitted to the City. Staff recommends project acceptance by the City Council.

BACKGROUND

The South Decoto Green Streets Project is a sustainable redevelopment project in the Decoto District that aims to create 'green' infrastructure that mimics natural systems to reduce reliance on essential city functions such as storm drainage. The project created tree-lined, pedestrian-friendly green streets, thereby contributing to overall quality of life while reducing water and air pollution, increasing groundwater recharge, and reducing water consumption.

The project included improvements to eight contiguous blocks of streets between F Street and I Street; and between 12th Street and 15th Street. The project includes intersection improvements and mid-block improvements to capture, retain, and treat storm water runoff and to enhance the pedestrian experience.

The intersection improvements consisted of constructing storm water filtration planters or 'rain gardens', sidewalk bulb-outs and specially marked crosswalks. The mid-block improvements consisted of installing permeable block pavers within the parking lanes for flow detention and water quality treatment. Each intersection intervention includes sidewalk bulb-outs at each corner, flanked by bio-filtration planters (rain gardens). The bulb-outs also serve to shorten crosswalk lengths, thereby enhancing pedestrian safety and slow down traffic. Gaps in the curbs allow storm water to flow into bio-filtration planters for treatment.

New street trees and other native landscaping have been planted along the length of the streets, within and adjacent to the bio-filtration planters, to provide natural cooling, water purification and a greatly enhanced natural aesthetics.

DISCUSSION

Bids were received for this project on July 30, 2015. The contract was awarded to the low bidder, Granite Rock Company of San Jose, California on August 11, 2015 in the amount of \$2,661,247.00. The project was substantially completed in August, 2016 and all final project punch-list items have now been resolved.

The final construction contract cost for the project work is \$2,781,587.27, which is \$120,340.20.27 (4.5%) above the original contract amount. The increase from the original contract is primarily accounted for by contract changes orders related to unforeseen conditions and utility conflicts. A summary of contract change orders is listed in the attached Notice of Acceptance.

Project related costs to date are as follows:

Design Engineering & Monitoring Contract (Bellecci and Associates)	\$ 548,990
Construction Contract (Granite Rock Company)	\$ 2,781,587
Construction Inspection Services Contract (Vali Cooper & Associates)/Material Testing Contract (Applied Materials)	\$ 163,722
Construction Staking Contract (Bellecci & Associates)	\$18,960
Estimated Project Management/Administration (City Staff)	\$ 75,000
Water Service Connection – ACWD Connection Fees	\$ 30,453
TOTAL	\$ 3,618,712

The total amount budgeted for this project (including design, outreach, construction, post-construction monitoring, and City's in-kind contribution) is \$4,000,000. The State Grant funding (Prop. 84) is budgeted for \$3,000,000 with the remaining \$1,000,000 is funded from a combination of the City's Clean Water Fund (Fund 2580) and Measure B Funds (Funds 2452 and 2453).

It should be noted that the State grant for the project is in the amount of \$3,000,000. The actual grant expenditure is in the amount of \$2,554,937.84, which leaves a balance of \$445,062.16 in unspent grant funds. City also expects to spend a little less than its \$1,000,000 matching share, as outlined in the grant agreement. Staff plans to discuss this situation with the State's Grant Manager to see if the grant agreement could be amended to allow the City to draw down the grant and recoup more of our costs since the City will be taking on the responsibility for the perpetual maintenance of these facilities.

FISCAL IMPACT

The City portion of the project funding is from a combination of City Clean Water Fund (Fund 2580) and Measure B (Fund 2452 and 2543). Sufficient funds are available in the approved project budget for the requested contract acceptance.

RECOMMENDATION

It is recommended that the City Council adopt the attached resolution accepting the South Decoto Green Streets Project from Granite Rock Company for the final contract amount of \$ 2,781,587.27.

Prepared by: Michael Renk, Civil Engineer III

Submitted by: Mintze Cheng, Public Works Director

Approved by: Antonio Acosta, City Manager



34009 ALVARADO-NILES ROAD
 UNION CITY, CA 94587
 (510) 471-3232

PAYABLE THROUGH
 BANK OF THE WEST

90-78
 1211

VENDOR #	DATE	CHECK NUMBER	CHECK AMOUNT
001129	10/30/2015	37158	*****106,466.00

VOID AFTER 90 DAYS

PAY One Hundred Six Thousand Four Hundred Sixty Six Dollars and No Cents

NON-NEGOTIABLE

PAY COUNTY OF ALAMEDA, TREASURER
 TO THE PUBLIC WORKS-FISCAL DIVISION
 ORDER 399 - A ELMHURST ST 3RD FLOOR
 HAYWARD, CA 94544

NON-NEGOTIABLE

COPY

COPY

COPY

COPY

COPY

UNION CITY, CA 94587

ACCOUNTS PAYABLE CHECK

NO.37158

INVOICE NUMBER	DATE	DESCRIPTION	P.O. NUMBER	DISCOUNT	AMOUNT
15M09:19	09/30/2015	PW- COUNTYWIDE CLEAN WATER CONTRIBU	1027152	0.00	106,466.00
					106,466.00



34009 ALVARADO-NILES ROAD
 UNION CITY, CA 94587
 (510) 471-3232

PAYABLE THROUGH
 BANK OF THE WEST

90-78
 1211

VENDOR #	DATE	CHECK NUMBER	CHECK AMOUNT
001129	12/02/2016	43676	*****106,466.00

VOID AFTER 90 DAYS

PAY One Hundred Six Thousand Four Hundred Sixty Six Dollars and No Cents

NON-NEGOTIABLE

PAY TO THE ORDER OF
 COUNTY OF ALAMEDA, TREASURER
 PUBLIC WORKS-FISCAL DIVISION
 399 - A ELMHURST ST 3RD FLOOR
 HAYWARD, CA 94544

NON-NEGOTIABLE

COPY COPY COPY COPY COPY

UNION CITY, CA 94587

ACCOUNTS PAYABLE CHECK

NO.43676

INVOICE NUMBER	DATE	DESCRIPTION	P.O. NUMBER	DISCOUNT	AMOUNT
16M11:14	11/10/2016	PW- COUNTYWIDE CLEAN WATER CONTRIBU	1031657	0.00	106,466.00
					106,466.00

1 DECLARATION OF JAMES SCANLIN IN SUPPORT OF TEST CLAIM

2 I, JAMES SCANLIN, declare as follows:

3 1. I make this declaration in support of the Test Claim submitted by the City of Union
4 City. Except where otherwise indicated, the facts set forth below are of my own personal
5 knowledge, and if called upon to testify, I could and would competently testify to the matters set
6 forth herein.

7 2. I have received the following degrees and credentials: Bachelor of Science in
8 Political Economy of Natural Resources, University of California, Berkeley; Master of Public
9 Administration, California State University, East Bay.

10 3. I am employed by Alameda County as an Associate Environmental Compliance
11 Specialist. In that position, I serve as lead staff member working on behalf of the Alameda
12 County Flood Control and Water Conservation District (“District”) for the Alameda Countywide
13 Clean Water Program (“Alameda Countywide Program,” or “Program”). The District has the
14 responsibility to administer and coordinate the Alameda Countywide Program.

15 4. The Alameda Countywide Program is a consortium made up of the Cities of
16 Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark,
17 Oakland, Piedmont, Pleasanton, San Leandro and Union City; the County of Alameda; the
18 District, and Zone 7 of the District (collectively, the “Consortium”). The Program was created in
19 1991 through a Memorandum of Agreement (“MOA”). Among other things, the MOA
20 established a General Program, which carries out activities in common on behalf of the
21 Consortium. The MOA also established a management structure and funding mechanism to carry
22 out general Programs activities.

23 5. I have held my current position since 1999. In this role, I have primary
24 responsibility on behalf of the District for administration and coordination of Alameda
25 Countywide Program activities. My duties include preparing annual budgets and expenditure
26 reports, coordinating and submitting required program-wide reports to the Regional Water Quality
27 Control Board (San Francisco Bay Region) (“Regional Water Board”), and advising the
28 Consortium on compliance with federal and state laws, regulations, and orders.

Municipal Regional Stormwater Permit, City of Union City, 6. Declarations (Scanlin)

1 6. Union City (City), along with all other Consortium members, is subject to the
2 Municipal Regional Stormwater NPDES Permit, issued by the Regional Water Board, Order No.
3 R2-2015-0049 (“MRP2”). I have reviewed the MRP2 and I am familiar with its requirements.

4 7. I have also reviewed and am familiar with the requirements of Order No. R2-2009-
5 0074 (NPDES Permit No. CAS612008) issued by the Regional Water Board on October 14,
6 2009, amended by Order No. R2-2011-0083 on November 28, 2011 (the “MRP1”), under which
7 the City was also a Permittee.

8 8. In order to provide the information required under Government Code section
9 17553, subdivision (b)(1)(E), Tom Ruark has requested that I provide a statewide cost estimate of
10 increased costs that all local agencies or school districts will incur to implement the mandates of
11 the MRP during the 2016/2017 fiscal year – the fiscal year immediately following the fiscal year
12 for which the claim was filed. I provide my cost estimates and associated methodology below.

13 9. Estimated Statewide Costs. MRP 2 requirements apply to the 76 cities, counties,
14 and flood control districts subject to MRP 2. Costs for each of the Permittees will vary depending
15 on a number of factors specific to each of the Permittees. However, the population of each
16 Permittee is a primary determining factor in the cost to comply with MRP 2 requirements. The
17 required mercury and PCB reductions are explicitly determined by each agency’s population.
18 Similarly, entities with higher populations will tend to have higher levels of trash reduction
19 required to meet the MRP2’s required trash reductions. Monitoring requirements in Provision C.8
20 vary generally based upon the relative populations of the countywide programs. As Union City is
21 a fairly typical Bay Area city, it is reasonable to extrapolate from Union City costs to the entire
22 MRP 2 area based upon the relative population of Union City compared to the population of the
23 entire area covered by MRP 2. Based upon the State Department of Finance estimates, Union
24 City’s 2017 population is 73,452. The estimated 2017 population for the entire MRP area is
25 5,662,448. The population of the entire MRP population is approximately 77 times the population
26 of Union City.

27 a. Trash Load Reduction. Like Union City, many MRP 2 Permittees are
28 relying heavily on the installation of full trash capture devices to meet their

1 trash reduction requirements. Some, like Union City, are installing the
2 smaller inlet filters. Others are relying more heavily on larger
3 hydrodynamic separators. The inlet filters are less expensive to install than
4 the hydrodynamic separators but require more effort to maintain. Union
5 City expects to expend approximately \$200,000 over three fiscal years to
6 install the devices, which equates to an average of \$67,000/year, and
7 \$145,000/year to maintain the devices, for a total average annual cost of
8 \$212,000/year. Other Permittees will be required to expend as similar level
9 of effort to comply with MRP 2. Extrapolating based upon population
10 results in an estimated fiscal year 2016/2017 statewide cost for compliance
11 with Provision C.10 of approximately \$16,324,000 (i.e., \$212,000 x77).
12 This does not include Union City's anticipated cost of \$432,423.57 for the
13 purchase of a Vactor truck. Not all entities will need to purchase a Vactor
14 truck immediately. However, almost all will use a Vactor truck, or contract
15 with a vendor with a Vactor truck, to complete their full trash capture
16 device maintenance. Costs will vary depending on the approach a Permittee
17 takes.

18 b. Green Infrastructure. As stated above, the amount Permittees are required
19 to reduce PCBs and mercury through green infrastructure is dependent upon
20 their population. During the first 18 months of MRP2, much of the required
21 work is on developing a plan to implement green infrastructure. (A
22 framework for the plan must be approved by the Permittees governing body
23 by June 30, 2017.) As with the Alameda Countywide Program, other
24 countywide programs under MRP2 are expending similar resources
25 assisting their member agencies with their green infrastructure plan
26 development. Therefore, extrapolating Union City's contribution to the
27 Alameda Countywide Program for these efforts based on Union City's
28 relative population is a reasonable approach. Union City's share of the

Municipal Regional Stormwater Permit, City of Union City, 6. Declarations (Scanlin)

1 Program's FY 16/17 costs to date is \$5,377. Extrapolating to the rest of the
2 MRP 2 Permittees based on population would provide an estimated total
3 cost of approximately \$414,029. Union City has also expended very
4 significant funding for the construction of green infrastructure projects.
5 Many other MRP 2 Permittees have as well, but the number and size of
6 projects completed to date varies widely among Permittees making it
7 difficult to extrapolate costs across MRP 2 Permittees. However, the
8 estimated long-term cost of \$3 million/year to meet Union City's 2040 PCB
9 and mercury load reduction target is reasonable to extrapolate to the entire
10 MRP2 area base upon population. This would provide an estimate of \$231
11 million/year (i.e., 77 x \$3 million).

12 c. Continuation of Monitoring. The monitoring required under Provision C.8
13 is allocated to the countywide programs roughly based on the relative
14 populations of the counties. The Countywide Clean Water Program's
15 expenditures for complying with Provision C.8 in fiscal year 16/17 were
16 \$429,476. Union City's share of the monitoring costs is 5.31% or Program
17 cost of \$22,805. The total statewide (i.e., MRP 2 jurisdictions) cost for
18 fiscal year 16/17 is estimated at \$1,397,892.

19 10. The Program incurred costs on behalf of the consortium members in order to
20 comply with the MRP mandates. In my role as lead staff member for the District, I supervise
21 contracts with and compliance actions taken by the Program on behalf of consortium members.
22 Below is summary of the Program's costs incurred regarding the MRP 2 mandates at issue in
23 Union City's Test Claim and an explanation of my methodology for determining Union City's
24 share of the costs.

25 Union City's share of costs are as follows:

Task	FY	Program Cost	Union City Share (5.31%)
C3, 11 and 12 GIS Development: Psomas (Through May)	16/17	\$42,752	\$2,270

Municipal Regional Stormwater Permit, City of Union City, 6. Declarations (Scanlin)

1	C3, 11 and 12 GIS Support: Geosyntec (Through April)	16/17	\$29,008	\$1,540
2	C.3.j. Green Infrastructure Plan Development: Horizon (Through April)	16/17	\$29,500	\$1,566
3	C.8. Water Quality Monitoring	16/17	\$429,476	\$22,805
4	TOTAL 16/17			\$28,182
5	Green Infrastructure Plan Development: Horizon	15/16	\$40,000	\$2,124
6	Trash mapping GIS: EOA	15/16	\$25,000	\$1,328
6	TOTAL 15/16			\$3,452

7
8 These costs were taken from consultant invoices that have been paid from Alameda Countywide
9 Program funds for the above tasks. Union City's share of Program costs (5.31%) were derived
10 from a formula based in part on the relative area and population of the Program member agencies.

11 11. I investigated the Program's files and records, and interviewed Program personnel
12 responsible for implementation of the C.8 Water Quality Monitoring program to determine the
13 precise date that the Program, acting on behalf of Union City and other members, *first* incurred
14 increased costs as a result of the new activities and modified existing activities mandated by
15 MRP2. As a result of this investigation and my interviews, I determined that Arleen Feng, the
16 Monitoring Program Manager, spent approximately 20 minutes on January 4, 2016, reviewing and
17 drafting correspondence with representatives of the Bay Area Stormwater Management Agencies
18 Association (BASMAA) Monitoring/Pollutants of Concern Committee in order to finalize an
19 agenda for a meeting scheduled for January 6, 2016. Ms. Feng also spent approximately four
20 hours attending the meeting on January 6, 2016. Also as a result of my investigation and my
21 interviews, I determined that the purpose of the meeting was to continue implementation of C.8
22 monitoring obligations originally imposed under MRP1 and continued on and mandated by
23 MRP2. Ms. Feng's hourly rate, including overhead, is \$181.00. So, the first incurred C.8 costs
24 under MRP2 were \$36.20 on January 4, 2016, and \$724.00 on January 6, 2016. As indicated
25 above, Union City's specific share of these costs would be approximately 5.31%.

26 12. I have personally compiled the information in the tables above and believe that the
27 information they contain is accurate.

28 I declare under penalty of perjury under the laws of the state of California that the

Municipal Regional Stormwater Permit, City of Union City, 6. Declarations (Scanlin)

1 foregoing is true and correct.

2 Executed on August 11, 2017, at Hayward, California.

3

4



JAMES SCANLIN

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7. DOCUMENTATION
IN SUPPORT OF UNION CITY TEST CLAIM
IN RE
MUNICIPAL REGIONAL STORMWATER PERMIT ISSUED BY
THE CALIFORNIA REGIONAL WATER QUALITY CONTROL
BOARD,
SAN FRANCISCO BAY REGION
NPDES NO. CAS612008
ISSUED AS ORDER NO. R2-2015-0049 (NOVEMBER 19, 2015)

EXHIBIT 1

**California Regional Water Quality Control Board
San Francisco Bay Region
Municipal Regional Stormwater NPDES Permit**

**Order R2-2009-0074
NPDES Permit No. CAS612008
Adopted October 14, 2009
Revised November 28, 2011**



**California Regional Water Quality Control Board
San Francisco Bay Region
Municipal Regional Stormwater NPDES Permit**

**ORDER R2-2009-0074
NPDES PERMIT NO. CAS612008**

Issuing Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) Permit for the discharge of stormwater runoff from the municipal separate storm sewer systems (MS4s) of the following jurisdictions and entities, which are permitted under this San Francisco Bay Municipal Regional Stormwater Permit (MRP):

The cities of Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, and Union City, Alameda County, the Alameda County Flood Control and Water Conservation District, and Zone 7 of the Alameda County Flood Control and Water Conservation District, which have joined together to form the Alameda Countywide Clean Water Program (Alameda Permittees)

The cities of Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, the Contra Costa County Flood Control and Water Conservation District, which have joined together to form the Contra Costa Clean Water Program (Contra Costa Permittees)

The cities of Campbell, Cupertino, Los Altos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, and Sunnyvale, the towns of Los Altos Hills and Los Gatos, the Santa Clara Valley Water District, and Santa Clara County, which have joined together to form the Santa Clara Valley Urban Runoff Pollution Prevention Program (Santa Clara Permittees)

The cities of Belmont, Brisbane, Burlingame, Daly City, East Palo Alto, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Redwood City, San Bruno, San Carlos, San Mateo, and South San Francisco, the towns of Atherton, Colma, Hillsborough, Portola Valley, and Woodside, the San Mateo County Flood Control District, and San Mateo County, which have joined together to form the San Mateo Countywide Water Pollution Prevention Program (San Mateo Permittees)

The cities of Fairfield and Suisun City, which have joined together to form the Fairfield-Suisun Urban Runoff Management Program (Fairfield-Suisun Permittees)

The City of Vallejo and the Vallejo Sanitation and Flood Control District (Vallejo Permittees)

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**Attachment M: Provision C.3.g. Santa Clara Permittees Revised Hydromodification
Management Map M-1**

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter referred to as the Water Board) finds that:

FINDINGS

Incorporation of Fact Sheet

1. The Fact Sheet for the San Francisco Bay Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (Appendix I) includes cited regulatory and legal references and additional explanatory information in support of the requirements of this Permit. This information, including any supplements thereto, and any response to comments on the Tentative Orders, is hereby incorporated by reference.

Existing Permits

2. **Alameda County**—The cities of Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, and Union City, Alameda County (Unincorporated area), the Alameda County Flood Control and Water Conservation District, and Zone 7 of the Alameda County Flood Control and Water Conservation District have joined together to form the Alameda Countywide Clean Water Program (hereinafter collectively referred to as the Alameda Permittees) and have submitted a permit application (Report of Waste Discharge), dated July 26, 2007, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Alameda Permittees' jurisdictions. The Alameda Permittees are currently subject to NPDES Permit No. CAS0029831 issued by Order No. R2-2003-0021 on February 19, 2003, and amended by Order No. R2-2007-0025 on March 14, 2007, to the Alameda Permittees to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.
3. **Contra Costa County**—The cities of Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District have joined together to form the Contra Costa Clean Water Program (hereinafter collectively referred to as the Contra Costa Permittees) and have submitted a permit application (Report of Waste Discharge), dated September 30, 2003, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Contra Costa Permittees' jurisdictions. The Contra Costa Permittees are currently subject to NPDES Permit No. CAS0029912 issued by Order No. 99-058 on July 21, 1999, amended by Order No. R2-2003-0022 on February 9, 2003, amended by Order Nos. R2-2004-059 and R2-2004-0061 on July 21, 2004, and amended by Order No. R2-2006-0050 on July 12, 2006, to the Contra Costa Permittees to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.
4. **San Mateo County**—The cities of Belmont, Brisbane, Burlingame, Daly City, East Palo Alto, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Redwood City, San Bruno, San Carlos, San Mateo, and South San Francisco, the towns of Atherton, Colma, Hillsborough, Portola Valley, and Woodside, the San Mateo County Flood Control District and San Mateo County have joined together to form the San Mateo Countywide Water Pollution Prevention

Program (hereinafter collectively referred to as the San Mateo Permittees) and have submitted a permit application (Report of Waste Discharge), dated January 23, 2004, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the San Mateo Permittees' jurisdictions. The San Mateo Permittees are currently subject to NPDES Permit No. CAS0029921 issued by Order No. 99-059 on July 21, 1999, amended by Order No. R2-2003-0023 on February 19, 2003, amended by Order Nos. R2-2004-0060 and R2-2004-0062 on July 21, 2004, and amended by Order R2-2007-0027 on March 14, 2007, to the San Mateo Permittees to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.

5. **Santa Clara County**—The cities of Campbell, Cupertino, Los Altos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, and Sunnyvale, the towns of Los Altos Hills and Los Gatos, the Santa Clara Valley Water District, and the County of Santa Clara have joined together to form the Santa Clara Valley Urban Runoff Pollution Prevention Program (hereinafter collectively referred to as the Santa Clara Permittees) and have submitted a permit application (Report of Waste Discharge), dated February 25, 2005, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Santa Clara Permittees' jurisdictions. The Santa Clara Permittees are currently subject to NPDES Permit No. CAS029718 issued by Order No. 01-024 on April 21, 2001, amended by Order No. 01-119 on October 17, 2001, and Order No. R2-2005-0035 on July 20, 2005, to the Santa Clara Permittees to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.
6. **Fairfield-Suisun**—The cities of Fairfield and Suisun City have joined together to form the Fairfield-Suisun Urban Runoff Management Program (hereinafter referred to as the Fairfield-Suisun Permittees) and have submitted a permit application (Report of Waste Discharge), dated October 17, 2007, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Fairfield-Suisun Permittees' jurisdictions. The Fairfield-Suisun Permittees are currently subject to NPDES Permit No. CAS0612005 issued by Order No. R2-2003-0034 on April 16, 2003, and amended by Order R2-2007-0026 on March 14, 2007, to the Fairfield-Suisun Permittees to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.
7. **Vallejo**—The City of Vallejo and the Vallejo Sanitary District (hereinafter referred to as the Vallejo Permittees) are currently subject to NPDES Permit No. CAS612006 issued by the United States Environmental Protection Agency (USEPA) on April 27, 1999, and that became effective on May 30, 1999, for the discharge of stormwater runoff from storm drains and watercourses within the Vallejo Permittees' jurisdictions.
8. The Alameda, Contra Costa, San Mateo, Santa Clara, Fairfield-Suisun, and Vallejo Permittees are hereinafter referred to in this Order as the Permittees.

Applicable Federal, State and Regional Regulations

9. Section 402(p) of the federal Clean Water Act (CWA), as amended by the Water Quality Act of 1987, requires NPDES permits for stormwater discharges from municipal separate storm sewer systems (MS4s), stormwater discharges associated with industrial activity (including construction activities), and designated stormwater discharges, which are considered significant contributors of pollutants to waters of the United States. On November 16, 1990, USEPA published regulations (40 CFR Part 122), which prescribe permit application requirements for MS4s pursuant to CWA 402(p). On May 17, 1996, USEPA published an Interpretive Policy

Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems, which provided guidance on permit application requirements for regulated MS4s.

10. The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Water Board and approved by the State Water Resources Control Board (State Board), Office of Administrative Law and the USEPA, where required.
11. The Water Board finds stormwater discharges from urban and developing areas in the San Francisco Bay Region to be significant sources of certain pollutants that cause or may be causing or threatening to cause or contribute to water quality impairment in waters of the Region. Furthermore, as delineated in the CWA section 303(d) list, the Water Board has found that there is a reasonable potential that municipal stormwater discharges cause or may cause or contribute to an excursion above water quality standards for the following pollutants: mercury, PCBs, furans, dieldrin, chlordane, DDT, and selenium in San Francisco Bay segments; pesticide associated toxicity in all urban creeks; and trash and low dissolved oxygen in Lake Merritt, in Alameda County. In accordance with CWA section 303(d), the Water Board is required to establish TMDLs for these pollutants to these waters to gradually eliminate impairment and attain water quality standards. Therefore, certain early pollutant control actions and further pollutant impact assessments by the Permittees are warranted and required pursuant to this Order.
12. The San Francisco Estuary Project, established pursuant to CWA Section 320, culminated in June 1993 with completion of its Comprehensive Conservation and Management Plan (CCMP) for the preservation, restoration, and enhancement of the San Francisco Bay-Delta Estuary. The 2007 update of the CCMP includes new and revised actions, while retaining many of the original plan's actions. The CCMP includes recommended actions in the areas of aquatic resources, wildlife, wetlands, water use, pollution prevention and reduction, dredging and waterway modification, land use, public involvement and education, and research and monitoring. Recommended actions which may, in part, be addressed through implementation of this Permit include, but are not limited to, the following:
 - (1) ACTION AR-9.1 (New 2007)
Improve understanding of sources, types, and impacts of marine debris in the Estuary.
 - (5) ACTION AR-9.2 (New 2007)
Expand existing marine debris prevention and cleanup programs and develop new initiatives to reduce discharge of debris to waterways.
 - (10) ACTION PO-1.2 (Revised 2007)
Recommend institutional and financial changes needed to place more focus on pollution prevention.
 - (12) ACTION PO-1.6 (Revised 2007)
Implement a comprehensive strategy to reduce pesticides coming into the Estuary.
 - (13) ACTION PO-1.7.1 (New 2007)
Develop product stewardship program for new commercial products to minimize future pollutant releases.

(14) ACTION PO-1.8 (New 2007)

Develop and implement programs to prevent pollution of the Estuary by other harmful pollutants like trash, bacteria, sediments, and nutrients.

(15) ACTION PO-2.1 (Revised 2007)

Pursue a mass emissions strategy to reduce pollutant discharges into the Estuary from point and nonpoint sources and to address the accumulation of pollutants in estuarine organisms and sediments.

(16) ACTION PO-2.4 (Revised 2007)

Improve the management and control of urban runoff from public and private sources.

(18) ACTION PO-3.3 (New 2007)

Accomplish large-scale improvements to Bay-Delta area infrastructure and implement pollution prevention strategies to prevent pollution threats to public health and wildlife.

(19) ACTION PO-4.1 (New 2007)

Increase regulatory incentives for municipalities, through urban runoff and other programs, to invest in projects that restore or enhance stream and wetland functions.

(20) ACTION LU-1.1 (Revised 2007)

Local land use jurisdiction's General Plans should incorporate watershed protection goals for wetlands and stream environments and to reduce pollutants in runoff.

(21) ACTION LU-1.1.1 (New 2007): Provide assistance to local agencies to ensure that applicable nonpoint source control elements are incorporated into local government and business practices.

(22) ACTION LU-1.5 (LU-3.2 in 1993 CCMP; Revised 2007)

Provide incentives and promote the use of building, planning, and maintenance guidelines for site planning and implementation of best management practices (BMPs) as related to stormwater and encourage local jurisdictions to adopt these guidelines as local ordinances.

(23) ACTION LU-1.6 (New 2007)

Continue and enhance training and certification for planners, public works departments, consultants, and builders on sustainable design and building practices with the goal of preventing or minimizing alteration of watershed functions (e.g., flood water conveyance, groundwater infiltration, stream channel and floodplain maintenance), and preventing construction-related erosion and post-construction pollution.

(24) ACTION LU-2.7 (New 2007)

Adopt and implement policies and plans that protect and restore water quality, flood water storage, and other natural functions of stream and wetland systems.

(25) ACTION LU-3.1 (New 2007)

Promote, encourage, and support collaborative partnerships with broad stakeholder representation, such as watershed councils, in order to develop diverse community-based approaches to long-term stewardship.

(26) ACTION LU-4.1 (Revised 2007)

Educate the public about how human actions impact the Estuary and its watersheds.

(28) ACTION PI-2.5 (Revised 2007)

Assist in the development of long-term educational programs designed to prevent pollution to the Estuary's ecosystem and provide assistance to other programs as needed.

13. Under section 13389 of the California Water Code, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA).

Nature of Discharges and Sources of Pollutants

14. Stormwater runoff is generated from various land uses in all the hydrologic sub basins in the Basin and discharges into watercourses, which in turn flow into Central, Lower and South San Francisco Bay.
15. The quality and quantity of runoff discharges vary considerably and are affected by hydrology, geology, land use, season, and sequence and duration of hydrologic events. Pollutants of concern in these discharges are certain heavy metals; excessive sediment production from erosion due to anthropogenic activities; petroleum hydrocarbons from sources such as used motor oil; microbial pathogens of domestic sewage origin from illicit discharges; certain pesticides associated with acute aquatic toxicity; excessive nutrient loads, which can cause or contribute to the depletion of dissolved oxygen and/or toxic concentrations of dissolved ammonia; trash, which impairs beneficial uses including, but not limited to, support for aquatic life; and other pollutants which can cause aquatic toxicity in the receiving waters.
16. Federal, State or regional entities within the Permittees' boundaries, not currently named in this Order, operate storm drain facilities and/or discharge stormwater to the storm drains and watercourses covered by this Order. The Permittees may lack jurisdiction over these entities. Consequently, the Water Board recognizes that the Permittees should not be held responsible for such facilities and/or discharges. The Water Board will consider such facilities for coverage under its NPDES permitting scheme pursuant to US EPA Phase II stormwater regulations. Under Phase II, the Water Board can permit these federal, State, and regional entities through use of the Statewide Phase II NPDES General Permit.
17. Certain pollutants present in stormwater and/or urban runoff can be derived from extraneous sources over which the Permittees have limited or no direct jurisdiction. Examples of such pollutants and their respective sources are polycyclic aromatic hydrocarbons (PAHs), which are products of internal combustion engine operation and other sources; heavy metals, such as copper from vehicle brake pad wear and zinc from vehicle tire wear; dioxins as products of combustion; polybrominated diphenyl ethers that are incorporated in many household products as flame retardants; mercury resulting from atmospheric deposition; and naturally occurring minerals from local geology. All these pollutants, and others, can be deposited on paved surfaces, rooftops, and other impervious surfaces as fine airborne particles—thus yielding stormwater runoff pollution that is unrelated to the activity associated with a given project site.
18. The Water Board will notify interested agencies and interested persons of the availability of reports, plans, and schedules, including Annual Reports, and will provide interested persons with an opportunity for a public hearing and/or an opportunity to submit their written views and recommendations. The Water Board will consider all comments and may modify the reports, plans, or schedules or may modify this Order in accordance with applicable law. All submittals required by this Order conditioned with acceptance by the Water Board will be subject to these notification, comment, and public hearing procedures.
19. This Order supersedes and rescinds Order Nos. 99-058, 99-059, 01-024, R2-2003-0021, R2-2003-0034, and supersedes NPDES Permit Nos. CAS0029831, CAS0029912, CAS0029921, CAS029718, CAS0612005, and CAS612006.

This Order serves as a NPDES permit, pursuant to CWA section 402, or amendments thereto, and shall become effective December 1, 2009, provided the Regional Administrator, USEPA, Region 9, has no objections.

IT IS HEREBY ORDERED that the Permittees, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted hereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted hereunder, shall comply with the following:

A. DISCHARGE PROHIBITIONS

- A.1.** The Permittees shall, within their respective jurisdictions, effectively prohibit the discharge of non-stormwater (materials other than stormwater) into, storm drain systems and watercourses. NPDES-permitted discharges are exempt from this prohibition. Provision C.15 describes a tiered categorization of non-stormwater discharges based on potential for pollutant content that may be discharged upon adequate assurance that the discharge contains no pollutants of concern at concentrations that will impact beneficial uses or cause exceedances of water quality standards.
- A.2.** It shall be prohibited to discharge rubbish, refuse, bark, sawdust, or other solid wastes into surface waters or at any place where they would contact or where they would be eventually transported to surface waters, including flood plain areas.

B. RECEIVING WATER LIMITATIONS

- B.1.** The discharge shall not cause the following conditions to create a condition of nuisance or to adversely affect beneficial uses of waters of the State:
- a.** Floating, suspended, or deposited macroscopic particulate matter, or foam;
 - b.** Bottom deposits or aquatic growths;
 - c.** Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d.** Visible, floating, suspended, or deposited oil or other products of petroleum origin; and
 - e.** Substances present in concentrations or quantities that would cause deleterious effects on aquatic biota, wildlife, or waterfowl, or that render any of these unfit for human consumption.
- B.2.** The discharge shall not cause or contribute to a violation of any applicable water quality standard for receiving waters. If applicable water quality objectives are adopted and approved by the State Board after the date of the adoption of this Order, the Water Board may revise and modify this Order as appropriate.

C.1. Compliance with Discharge Prohibitions and Receiving Water Limitations

The Permittees shall comply with Discharge Prohibitions A.1 and A.2 and Receiving Water Limitations B.1 and B.2 through the timely implementation of control measures and other actions as specified in Provisions C.2 through C.15.

If exceedance(s) of water quality standards or water quality objectives (collectively, WQSs) persist in receiving waters, the Permittees shall comply with the following procedure:

- C.1.a.** Upon a determination by either the Permittee(s) or the Water Board that discharges are causing or contributing to an exceedance of an applicable WQS, the Permittee(s) shall notify, within no more than 30 days, and thereafter, except for any exceedances of WQSs for pesticides, trash, mercury, polychlorinated biphenols, copper, polybrominated diphenyl ethers, and selenium that are addressed pursuant to Provisions C.8 through C.14 of this Order, submit a report to the Water Board that describes BMPs that are currently being implemented, and the current level of implementation, and additional BMPs that will be implemented, and/or an increased level of implementation, to prevent or reduce the discharge of pollutants that are causing or contributing to the exceedance of WQSs. The report may be submitted in conjunction with the Annual Report, unless the Water Board directs an earlier submittal, and shall constitute a request to the Water Board for amendment of this NPDES Permit. The report and application for amendment shall include an implementation schedule. The Water Board may require modifications to the report and application for amendment; and
- C.1.b.** Submit any modifications to the report required by the Water Board within 30 days of notification.

As long as the Permittees have complied with the procedures set forth above, they do not have to repeat the same procedure for continuing or recurring exceedances of the same WQSs unless directed by the Water Board to develop additional control measures and BMPs and reinitiate the Permit amendment process.

C.2. Municipal Operations

The purpose of this provision is to ensure development and implementation of appropriate BMPs by all Permittees to control and reduce non-stormwater discharges and polluted stormwater to storm drains and watercourses during operation, inspection, and routine repair and maintenance activities of municipal facilities and infrastructure.

C.2.a. Street and Road Repair and Maintenance

- i. **Task Description** – Asphalt/Concrete Removal, Cutting, Installation and Repair - The Permittees shall develop and implement appropriate BMPs at street and road repair and/or maintenance sites to control debris and waste materials during road and parking lot installation, repaving or repair maintenance activities, such as those described in the California Stormwater Quality Association’s Handbook for Municipal Operations.
- ii. **Implementation Levels**
 - (1) The Permittees shall require proper management of concrete slurry and wastewater, asphalt, pavement cutting, and other street and road maintenance materials and wastewater to avoid discharge to storm drains from such work sites. The Permittees shall coordinate with sanitary sewer agencies to determine if disposal to the sanitary sewer system is available for the wastewater generated from these activities provided that appropriate approvals and pretreatment standards are met.
 - (2) The Permittees shall require sweeping and/or vacuuming to remove debris, concrete, or sediment residues from such work sites upon completion of work. The Permittees shall require cleanup of all construction remains, spills and leaks using dry methods (e.g., absorbent materials, rags, pads, and vacuuming), as described in the Bay Area Stormwater Management Agencies Association’s (BASMAA’s) Blueprint for a Clean Bay.
- iii. **Reporting** – The Permittees shall report on implementation of and compliance with these BMPs in the Annual Report

C.2.b. Sidewalk/Plaza Maintenance and Pavement Washing

- i. **Task Description** – The Permittees shall implement, and require to be implemented, BMPs for pavement washing, mobile cleaning, pressure wash operations in such locations as parking lots and garages, trash areas, gas station fueling areas, and sidewalk and plaza cleaning, which prohibit the discharge of polluted wash water and non-stormwater to storm drains. The Permittees shall implement the BMPs included in BASMAA’s Mobile Surface Cleaner Program. The Permittees shall coordinate with sanitary sewer agencies to determine if disposal to the sanitary sewer is available for the wastewater generated from these activities provided that appropriate approvals and pretreatment standards are met.

- ii. **Reporting** – The Permittees shall report on implementation of and compliance with these BMPs in their Annual Report.

C.2.c. Bridge and Structure Maintenance and Graffiti Removal

i. Task Description

- (1) The Permittees shall implement appropriate BMPs to prevent polluted stormwater and non-stormwater discharges from bridges and structural maintenance activities directly over water or into storm drains.
- (2) The Permittees shall implement BMPs for graffiti removal that prevent non-stormwater and wash water discharges into storm drains.

ii. Implementation Levels

- (1) The Permittees shall prevent all debris, including structural materials and coating debris, such as paint chips, or other debris and pollutants generated in bridge and structure maintenance or graffiti removal from entering storm drains or water courses.
- (2) The Permittees shall protect nearby storm drain inlets before removing graffiti from walls, signs, sidewalks or other structures. The Permittees shall prevent any discharge of debris, cleaning compound waste, paint waste or wash water due to graffiti removal from entering storm drains or watercourses.
- (3) The Permittees shall determine the proper disposal method for wastes generated from these activities. The Permittees shall train their employees and/or specify in contracts about these proper capture and disposal methods for the wastes generated.

- iii. **Reporting** – The Permittees shall report on implementation of and compliance with these BMPs in their Annual Report.

C.2.d. Stormwater Pump Stations

The objective of this sub-provision is to prevent the discharge of water with low dissolved oxygen (DO) from pump stations, and to explore the use of pump stations for trash capture and removal from waters to protect beneficial uses of receiving waters.

- i. **Task Description** – Operation and Maintenance of Stormwater Pump Stations – The Permittees shall develop and implement measures to operate, inspect, and maintain these facilities to eliminate non-stormwater discharges containing pollutants, and to reduce pollutant loads in the stormwater discharges to comply with WQSs.
- ii. **Implementation Levels** – The Permittees shall comply with the following implementation measures to reduce polluted water discharges from Permittee-owned or operated pump stations:

- (1) Complete an inventory of pump stations within each Permittee's jurisdiction, including locations, and key characteristics¹ by March 1, 2010.
- (2) Inspect and collect DO data from all pump stations twice a year during the dry season after July 1, starting in 2010. DO monitoring is exempted where all discharge from a pump station remains in the stormwater collection system or infiltrates into a dry creek immediately downstream.
- (3) If DO levels are at or below 3 milligrams per liter (3 mg/L), apply corrective actions, such as continuous pumping at a low flow rate, aeration, or other appropriate methods to maintain DO concentrations of the discharge above 3 mg/L. Verify corrective actions are effective by increasing DO monitoring interval to weekly until two weekly samples are above 3 mg/L.
- (4) Starting in fall 2010, inspect pump stations a minimum of two times during the wet season in the first business day after ¼-inch and larger storm events after a minimum of a two week antecedent period with no precipitation. Post-storm inspections shall collect and report presence and quantity estimates of trash, including presence of odor, color, turbidity, and floating hydrocarbons. Remove debris and trash and replace any oil absorbent booms, as needed.

iii. Reporting – The Permittees shall report information resulting from C.2.d.ii.(2)-(4), including DO monitoring data and subsequent corrective actions taken to verify compliance with the 3 mg/L implementation level, in their Annual Report, and maintain records of inspection and maintenance activities and volume or mass of waste materials removed from pump stations.

C.2.e. Rural Public Works Construction and Maintenance

- i. Task Description** – Rural Road and Public Works Construction and Maintenance - For the purpose of this provision, rural means any watershed or portion thereof that is developed with large lot home-sites, such as one acre or larger, or with primarily agricultural, grazing or open space uses. The Permittees shall implement and require contractors to implement BMPs for erosion and sediment control during and after construction for maintenance activities on rural roads, particularly in or adjacent to stream channels or wetlands. The Permittees shall notify the Water Board, the California Department of Fish and Game and the U.S. Army Corps of Engineers, where applicable, and obtain appropriate agency permits for rural public works activities before work in or near creeks and wetlands.

¹ Characteristics include name of pump station, latitude and longitude in WGS 84, number of pumps, drainage area in acres, dominant land use(s), first receiving water body, maximum pumping capacity of station in gallons per minute (gpm), flow measurement capability (Y or N), flow measurement method, average wet season discharge rate in gpm, dry season discharge (Y, N, or unknown), nearest municipal wastewater treatment plant, wet well storage capacity in gallons, trash control (Y or N), trash control measure, and date built or last updated.

ii. Implementation Level

- (1) The Permittees shall develop, where they do not already exist, and implement BMPs for erosion and sediment control measures during construction and maintenance activities on rural roads, including developing and implementing appropriate training and technical assistance resources for rural public works activities, by April 1, 2010.
- (2) The Permittees shall develop and implement appropriate BMPs for the following activities, which minimize impacts on streams and wetlands in the course of rural road and public works maintenance and construction activities:
 - (a) Road design, construction, maintenance, and repairs in rural areas that prevent and control road-related erosion and sediment transport;
 - (b) Identification and prioritization of rural road maintenance on the basis of soil erosion potential, slope steepness, and stream habitat resources;
 - (c) Construction of roads and culverts that do not impact creek functions. New or replaced culverts shall not create a migratory fish passage barrier, where migratory fish are present, or lead to stream instability;
 - (d) Development and implementation of an inspection program to maintain rural roads' structural integrity and prevent impacts on water quality;
 - (e) Maintenance of rural roads adjacent to streams and riparian habitat to reduce erosion, replace damaging shotgun culverts and excessive erosion;
 - (f) Re-grading of unpaved rural roads to slope outward where consistent with road engineering safety standards, and installation of water bars as appropriate; and
 - (g) Replacement of existing culverts or design of new culverts or bridge crossings shall use measures to reduce erosion, provide fish passage and maintain natural stream geomorphology in a stable manner.
- (3) The Permittees shall develop or incorporate existing training and guidance on permitting requirements for rural public works activities so as to stress the importance of proper planning and construction to avoid water quality impacts.
- (4) The Permittees shall provide training incorporating these BMPs to rural public works maintenance staff at least twice within this Permit term.

iii. Reporting – The Permittees shall report on the implementation of and compliance with BMPs for the rural public works construction and maintenance activities in their Annual Report, including reporting on increased maintenance in priority areas.

C.2.f. Corporation Yard BMP Implementation

i. Task Description – Corporation Yard Maintenance

- (1) The Permittees shall prepare, implement, and maintain a site specific Stormwater Pollution Prevention Plan (SWPPP) for corporation yards, including municipal vehicle maintenance, heavy equipment and maintenance vehicle parking areas, and material storage facilities to comply with water quality standards. Each SWPPP shall incorporate all applicable BMPs that are described in the California Stormwater Quality Association's Handbook for Municipal Operations and the Caltrans Storm Water Quality Handbook Maintenance Staff Guide, May 2003, and its addenda, as appropriate.
- (2) The requirements in this provision shall apply only to facilities that are not already covered under the State Board's Industrial Stormwater NPDES General Permit.
- (3) The site specific SWPPPs for corporation yards shall be completed by July 1, 2010.

ii. Implementation Level

- (1) Implement BMPs to minimize pollutant discharges in stormwater and prohibit non-stormwater discharges, such as wash waters and street sweeper, vactor, and other related equipment cleaning wash water. Pollution control actions shall include, but not be limited to, good housekeeping practices, material and waste storage control, and vehicle leak and spill control.
- (2) Routinely inspect corporation yards to ensure that no non-stormwater discharges are entering the storm drain system and, during storms, pollutant discharges are prevented to the maximum extent practicable. At a minimum, an inspection shall occur before the start of the rainy season.
- (3) Plumb all vehicle and equipment wash areas to the sanitary sewer after coordination with the local sanitary sewer agency and equip with a pretreatment device (if necessary) in accordance with the requirements of the local sanitary sewer agency.
- (4) Use dry cleanup methods when cleaning debris and spills from corporation yards. If wet cleaning methods must be used (e.g., pressure washing), the Permittee shall ensure that wash water is collected and disposed in the sanitary sewer after coordination with the local sanitary sewer agency and in accordance with the requirements of the local sanitary sewer agency. Any private companies hired by the Permittee to perform cleaning activities on Permittee-owned property shall follow the same requirements. In areas where sanitary sewer connection is not available, the Permittees shall collect and haul the wash water to a municipal wastewater treatment plant, or implement appropriate BMPs and dispose

of the wastewater to land in a manner that does not adversely impact surface water or groundwater.

- (5) Outdoor storage areas containing waste pollutants shall be covered and/or bermed to prevent discharges of polluted stormwater runoff or run-on to storm drain inlets.

iii. Reporting – The Permittees shall report on implementation of SWPPPs, the results of inspections, and any follow-up actions in their Annual Report.

C.3. New Development and Redevelopment

The goal of Provision C.3 is for the Permittees to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.

C.3.a. New Development and Redevelopment Performance Standard Implementation

i. Task Description – At a minimum each Permittee shall:

- (1) Have adequate legal authority to implement all requirements of Provision C.3;
- (2) Have adequate development review and permitting procedures to impose conditions of approval or other enforceable mechanisms to implement the requirements of Provision C.3. For projects discharging directly to CWA section 303(d)-listed waterbodies, conditions of approval must require that post-development runoff not exceed pre-development levels for such pollutants that are listed;
- (3) Evaluate potential water quality effects and identify appropriate mitigation measures when conducting environmental reviews, such as under CEQA;
- (4) Provide training adequate to implement the requirements of Provision C.3 for staff, including interdepartmental training;
- (5) Provide outreach adequate to implement the requirements of Provision C.3, including providing education materials to municipal staff, developers, contractors, construction site operators, and owner/builders, early in the planning process and as appropriate;
- (6) For all new development and redevelopment projects that are subject to the Permittee's planning, building, development, or other comparable review, but not regulated by Provision C.3, encourage the inclusion of adequate site design measures that may include minimizing land disturbance and impervious surfaces (especially parking lots); clustering of structures and pavement; directing roof runoff to vegetated areas; use of micro-detention, including distributed landscape-based detention; preservation of open space; protection and/or restoration of riparian areas and wetlands as project amenities;
- (7) For all new development and redevelopment projects that are subject to the Permittee's planning, building, development, or other comparable review, but not regulated by Provision C.3, encourage the inclusion of adequate source control measures to limit pollutant generation, discharge, and runoff. These source control measures should include:
 - Storm drain stenciling.

- Landscaping that minimizes irrigation and runoff, promotes surface infiltration where possible, minimizes the use of pesticides and fertilizers, and incorporates appropriate sustainable landscaping practices and programs such as Bay-Friendly Landscaping.
 - Appropriate covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas.
 - Covered trash, food waste, and compactor enclosures.
 - Plumbing of the following discharges to the sanitary sewer, subject to the local sanitary sewer agency's authority and standards:
 - Discharges from indoor floor mat/equipment/hood filter wash racks or covered outdoor wash racks for restaurants.
 - Dumpster drips from covered trash and food compactor enclosures.
 - Discharges from outdoor covered wash areas for vehicles, equipment, and accessories.
 - Swimming pool water, if discharge to onsite vegetated areas is not a feasible option.
 - Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option.
- (8) Revise, as necessary, General Plans to integrate water quality and watershed protection with water supply, flood control, habitat protection, groundwater recharge, and other sustainable development principles and policies (e.g., referencing the Bay-Friendly Landscape Guidelines).
- ii. Implementation Level** – Most of the elements of this task should already be fully implemented because they are required in the Permittees' existing stormwater permits.
- Due Dates for Full Implementation** – Immediate for C.3.a.i.(1)-(5), May 1, 2010 for C.3.a.i.(6)-(7), and December 1, 2010 for C.3.a.i.(8). For Vallejo Permittees: December 1, 2010 for C.3.a.i.(1)-(8)
- iii. Reporting** – Provide a brief summary of the method(s) of implementation of Provisions C.3.a.i.(1)–(8) in the 2011 Annual Report.

C.3.b. Regulated Projects

- i. Task Description** – The Permittees shall require all projects fitting the category descriptions listed in Provision C.3.b.ii below (hereinafter called Regulated Projects) to implement LID source control, site design, and stormwater treatment onsite or at a joint stormwater treatment facility² in accordance with Provisions C.3.c and C.3.d, unless the Provision C.3.e alternate compliance options are evoked. For adjacent Regulated Projects that will discharge runoff to a joint stormwater treatment facility, the treatment facility must be completed by

² **Joint stormwater treatment facility** – Stormwater treatment facility built to treat the combined runoff from two or more Regulated Projects located adjacent to each other,

the end of construction of the first Regulated Project that will be discharging runoff to the joint stormwater treatment facility.

Regulated Projects, as they are defined in this Provision, do not include detached single-family home projects that are not part of a larger plan of development.

ii. Regulated Projects are defined in the following categories:

(1) Special Land Use Categories

(a) **New Development or redevelopment projects** that fall into one of the categories listed below and that create and/or replace 10,000 square feet or more of impervious surface (collectively over the entire project site). This category includes development projects of the following four types on public or private land that fall under the planning and building authority of a Permittee:

- (i) Auto service facilities, described by the following Standard Industrial Classification (SIC) Codes: 5013, 5014, 5541, 7532-7534, and 7536-7539;
- (ii) Retail gasoline outlets;
- (iii) Restaurants (SIC Code 5812); or
- (iv) Uncovered parking lots that are stand-alone or part of any other development project. This category includes the top uncovered portion of parking structures unless drainage from the uncovered portion is connected to the sanitary sewer along with the covered portions of the parking structure.

(b) For redevelopment projects in the categories specified in Provision C.3.b.ii.(1)(a)(i)-(iv), specific exclusions are:

- (i) Interior remodels;
- (ii) Routine maintenance or repair such as:
 - roof or exterior wall surface replacement,
 - pavement resurfacing within the existing footprint.

(c) Where a redevelopment project in the categories specified in Provision C.3.b.ii.(1)(a)(i)-(iv) results in an alteration of **more than 50 percent** of the impervious surface of a previously existing development that was not subject to Provision C.3, the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire redevelopment project).

(d) Where a redevelopment project in the categories specified in Provision C.3.b.ii.(1)(a)(i)-(iv) results in an alteration of **less than 50 percent** of the impervious surface of a previously existing development that was not subject to Provision C.3, only the new and/or replaced impervious surface of the project must be included in the treatment system design (i.e., stormwater treatment systems must

be designed and sized to treat stormwater runoff from the new and/or replaced impervious surface of the project).

- (e) For any private development project in the categories specified in Provisions C.3.b.ii.(1)(a)(i)-(iv) for which a planning application has been deemed complete by a Permittee on or before the Permit effective date, the lower 5000 square feet impervious surface threshold (for classification as a Regulated Project) shall not apply so long as the project applicant is diligently pursuing the project. Diligent pursuance may be demonstrated by the project applicant's submittal of supplemental information to the original application, plans, or other documents required for any necessary approvals of the project by the Permittee. If during the time period between the Permit effective date and the required implementation date of December 1, 2011, for the 5000 square feet threshold, the project applicant has not taken any action to obtain the necessary approvals from the Permittee, the project will then be subject to the lower 5000 square feet impervious surface threshold specified in Provision C.3.b.ii.(1).
- (f) For any private development project in the categories specified in Provisions C.3.b.ii.(1)(a)(i)-(iv) with an application deemed complete after the Permit effective date, the lower 5000 square feet impervious surface threshold (for classification as a Regulated Project) shall not apply if the project applicant has received final discretionary approval for the project before the required implementation date of December 1, 2011, for the 5000 square feet threshold.
- (g) For public projects for which funding has been committed and construction is scheduled to begin by December 1, 2012, the lower 5000 square feet of impervious surface threshold (for classification as a Regulated Project) shall not apply.

Effective Date – Immediate, except December 1, 2010, for Vallejo Permittees.

Beginning December 1, 2011, all references to 10,000 square feet in Provision C.3.b.ii.(1) change to 5,000 square feet.

(2) **Other Development Projects**

New development projects that create 10,000 square feet or more of impervious surface (collectively over the entire project site) including commercial, industrial, residential housing subdivisions (i.e., detached single-family home subdivisions, multi-family attached subdivisions (town homes), condominiums, and apartments), mixed-use, and public projects. This category includes development projects on public or private land that fall under the planning and building authority of a Permittee. Detached single-family home projects that are not part of a larger plan of development are specifically excluded.

Effective Date – Immediate, except December 1, 2010, for Vallejo Permittees.

(3) **Other Redevelopment Projects**

Redevelopment projects that create and/or replace 10,000 square feet or more of impervious surface (collectively over the entire project site) including commercial, industrial, residential housing subdivisions (i.e., detached single-family home subdivisions, multi-family attached subdivisions (town homes), condominiums, and apartments), mixed-use, and public projects. Redevelopment is any land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred. This category includes redevelopment projects on public or private land that fall under the planning and building authority of a Permittee.

Specific exclusions to this category are:

- Interior remodels.
 - Routine maintenance or repair such as:
 - roof or exterior wall surface replacement, or
 - pavement resurfacing within the existing footprint.
- (a) Where a redevelopment project results in an alteration of **more than 50 percent** of the impervious surface of a previously existing development that was not subject to Provision C.3, the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire redevelopment project).
- (b) Where a redevelopment results in an alteration of **less than 50 percent** of the impervious surface of a previously existing development that was not subject to Provision C.3, only the new and/or replaced impervious surface of the project must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the new and/or replaced impervious surface of the project).

Effective Date – Immediate, except December 1, 2010, for Vallejo Permittees.

(4) **Road Projects**

Any of the following types of road projects that create 10,000 square feet or more of newly constructed contiguous impervious surface and that fall under the building and planning authority of a Permittee:

- (a) Construction of new streets or roads, including sidewalks and bicycle lanes built as part of the new streets or roads.
- (b) Widening of existing streets or roads with additional traffic lanes.

- (i) Where the addition of traffic lanes results in an alteration of **more than 50 percent** of the impervious surface of an existing street or road that was not subject to Provision C.3, **the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design** (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire street or road that had additional traffic lanes added).
- (ii) Where the addition of traffic lanes results in an alteration of **less than 50 percent** of the impervious surface of an existing street or road that was not subject to Provision C.3, **only the new and/or replaced impervious surface of the project must be included in the treatment system design** (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from only the new traffic lanes). However, if the stormwater runoff from the existing traffic lanes and the added traffic lanes cannot be separated, any onsite treatment system must be designed and sized to treat stormwater runoff from the entire street or road. If an offsite treatment system is installed or in-lieu fees paid in accordance with Provision C.3.e, the offsite treatment system or in-lieu fees must address only the stormwater runoff from the added traffic lanes.
- (c) Construction of impervious trails that are greater than 10 feet wide or are creek-side (within 50 feet of the top of bank).
- (d) Specific exclusions to Provisions C.3.b.ii.(4)(a)-(c) are:
- Sidewalks built as part of new streets or roads and built to direct stormwater runoff to adjacent vegetated areas.
 - Bicycle lanes that are built as part of new streets or roads but are not hydraulically connected to the new streets or roads and that direct stormwater runoff to adjacent vegetated areas.
 - Impervious trails built to direct stormwater runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees.
 - Sidewalks, bicycle lanes, or trails constructed with permeable surfaces.³
 - Caltrans highway projects and associated facilities.
- (e) For any private road or trail project described by Provisions C.3.b.ii.(4)(b) or (c) for which a planning application has been deemed complete by a Permittee on or before the Permit effective date, the requirements of Provisions C.3.b.ii.(4)(b) or (c) to classify the project as a Regulated Project shall not apply so long as the project applicant is diligently pursuing the project. Diligent pursuance

³ **Permeable surfaces** include pervious concrete, porous asphalt, unit pavers, and granular materials.

may be demonstrated by the project applicant's submittal of supplemental information to the original application, plans, or other documents required for any necessary approvals of the project by the Permittee. If during the time period between the Permit effective date and the required implementation date of December 1, 2011, for Provisions C.3.b.ii.(4)(b) and (c), the project applicant has not taken any action to obtain the necessary approvals from the Permittee, the project will then be classified as a Regulated Project under Provisions C.3.b.ii.(4)(b) or (c).

- (f) For any private road or trail project with an application deemed complete after the Permit effective date, the requirements of Provisions C.3.b.i.(4)(b) or (c) to classify the project as a Regulated Project shall not apply if the project applicant has received final discretionary approval for the project before the required implementation date of December 1, 2011, for Provisions C.3.b.ii.(4)(b) and (c).
- (g) For any public road or trail project for which funding has been committed and construction is scheduled to begin by December 1, 2012, the requirements of Provisions C.3.b.i.(4)(b) or (c) to classify the project as a Regulated Project shall not apply.

Effective Date – Immediate for C.3.b.ii.(4)(a) and (d)-(g), and December 1, 2011, for C.3.b.ii.(4)(b) and (c). For Vallejo Permittees: Immediate for C.3.b.ii.(4)(d)-(g), and December 1, 2011 for C.3.b.ii.(4)(a)-(c).

iii. Green Street Pilot Projects

The Permittees shall cumulatively complete ten pilot green street projects that incorporate LID techniques for site design and treatment in accordance with Provision C.3.c and that provide stormwater treatment sized in accordance with Provision C.3.d. It is also desirable that they meet or exceed the Bay-Friendly Landscape Scorecard minimum requirements (see www.BayFriendly.org).

- (1) Parking lot projects that provide LID treatment in accordance with Provisions C.3.c and Provision C.3.d. for stormwater runoff from the parking lot and street may be considered pilot green street projects.
- (2) A Regulated Project (as defined in Provision C.3.b.ii) may not be counted as one of the ten pilot green street projects.
- (3) At least two pilot green street projects must be located in each of the following counties: Alameda, Contra Costa, San Mateo, and Santa Clara.
- (4) The Permittees shall construct the ten pilot green street projects in such a manner that they, as a whole:
 - (a) Are representative of the various types of streets: arterial, collector, and local; and
 - (b) Contain the following key elements:

- (i) Stormwater storage for landscaping reuse or stormwater treatment and/or infiltration for groundwater replenishment through the use of natural feature systems;
 - (ii) Creation of attractive streetscapes that enhance neighborhood livability by enhancing the pedestrian environment and introducing park-like elements into neighborhoods;
 - (iii) Service as an urban greenway segment that connects neighborhoods, parks, recreation facilities, schools, mainstreets, and wildlife habitats;
 - (iv) Parking management that includes maximum parking space requirements as opposed to minimum parking space requirements, parking requirement credits for subsidized transit or shuttle service, parking structures, shared parking, car sharing, or on-street diagonal parking;
 - (v) Meets broader community goals by providing pedestrian and, where appropriate, bicycle access; and
 - (vi) Located in a Priority Development Area as designated under the Association of Bay Area Government's and Metropolitan Transportation Commission's FOCUS⁴ program.
- (5) The Permittees shall conduct appropriate monitoring of these projects to document the water quality benefits achieved. Appropriate monitoring may include modeling using the design specifications and specific site conditions.

Due Date – All pilot green street projects shall be completed by December 1, 2014.

- iv. Implementation Level** – All elements of Provision C.3.b.i.-iii shall be fully implemented by the effective/due dates set forth in their respective sub-provision, and a database or equivalent tabular format shall be developed and maintained that contains all the information listed under Reporting (Provision C.3.b.v.).

Due Dates for Full Implementation – See specific Effective Dates listed under Provisions C.3.b.ii& iii. The database or equivalent tabular format required by Provision C.3.b.iv shall be developed by December 1, 2010. (For Vallejo Permittees: December 1, 2011)

v. Reporting

(1) Annual Reporting – C.3.b.ii. Regulated Projects

For each Regulated Project approved during the fiscal year reporting period, the following information shall be reported electronically in the fiscal year Annual Report, in tabular form (as set forth in the attached Provision C.3.b. Sample Reporting Table):

- (a) Project Name, Number, Location (cross streets), and Street Address;

⁴ [FOCUS](#) is a regional incentive-based development and conservation strategy for the Bay Area.

- (b) Name of Developer, Phase No. (if project is being constructed in phases, each phase should have a separate entry), Project Type (e.g., commercial, industrial, multiunit residential, mixed-use, public), and description;
 - (c) Project watershed;
 - (d) Total project site area and total area of land disturbed;
 - (e) Total new impervious surface area and/or total replaced impervious surface area;
 - (f) If redevelopment or road widening project, total pre-project impervious surface area and total post-project impervious surface area;
 - (g) Status of project (e.g., application date, application deemed complete date, project approval date);
 - (h) Source control measures;
 - (i) Site design measures;
 - (j) All post-construction stormwater treatment systems installed onsite, at a joint stormwater treatment facility, and/or at an offsite location;
 - (k) Operation and maintenance responsibility mechanism for the life of the project.
 - (l) Hydraulic Sizing Criteria used;
 - (m) Alternative compliance measures for Regulated Project (if applicable)
 - (i) If alternative compliance will be provided at an offsite location in accordance with Provision C.3.e.i.(1), include information required in Provision C.3.b.v.(a) – (l) for the offsite project; and
 - (ii) If alternative compliance will be provided by paying in-lieu fees in accordance with Provision C.3.e.i.(2), provide information required in Provision C.3.b.v.(a) – (l) for the Regional Project. Additionally, provide a summary of the Regional Project’s goals, duration, estimated completion date, total estimated cost of the Regional Project, and estimated monetary contribution from the Regulated Project to the Regional Project; and
 - (n) Hydromodification (HM) Controls (see Provision C.3.g.) – If not required, state why not. If required, state control method used.
- (2) **Pilot Green Streets Project Reporting - Provision C.3.b.iii.**
- (a) On an annual basis, the Permittees shall report on the status of the pilot green street projects.
 - (b) For each completed project, the Permittees shall report the capital costs, operation and maintenance costs, legal and procedural arrangements in place to address operation and maintenance and its associated costs, and the sustainable landscape measures incorporated in the project including, if relevant, the score from the Bay-Friendly Landscape Scorecard.

- (c) The 2013 Annual Report shall contain a summary of all green street projects completed by January 1, 2013. The summary shall include for each completed project the following information:
 - (i) Location of project
 - (ii) Size of project, including total impervious surface treated
 - (iii) Map(s) of project showing areas where stormwater runoff will be treated by LID measures
 - (iv) Specific type(s) of LID treatment measures included
 - (v) Total and specific costs of project
 - (vi) Specific funding sources for project and breakdown of percentage paid by each funding source
 - (vii) Lessons learned, including recommendations to facilitate funding and building of future projects
 - (viii) Identification of responsible party and funding source for operation and maintenance.

C.3.c. Low Impact Development (LID)

The goal of LID is to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Practices used to adhere to these LID principles include measures such as rain barrels and cisterns, green roofs, permeable pavement, preserving undeveloped open space, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes.

Task Description

- i. The Permittees shall, at a minimum, implement the following LID requirements:

- (1) **Source Control Requirements**

Require all Regulated Projects to implement source control measures onsite that at a minimum, shall include the following:

- (a) Minimization of stormwater pollutants of concern in urban runoff through measures that may include plumbing of the following discharges to the sanitary sewer, subject to the local sanitary sewer agency's authority and standards:
 - Discharges from indoor floor mat/equipment/hood filter wash racks or covered outdoor wash racks for restaurants;
 - Dumpster drips from covered trash, food waste and compactor enclosures;
 - Discharges from covered outdoor wash areas for vehicles, equipment, and accessories;

- Swimming pool water, if discharge to onsite vegetated areas is not a feasible option; and
 - Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option;
- (b) Properly designed covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas;
- (c) Properly designed trash storage areas;
- (d) Landscaping that minimizes irrigation and runoff, promotes surface infiltration, minimizes the use of pesticides and fertilizers, and incorporates other appropriate sustainable landscaping practices and programs such as Bay-Friendly Landscaping;
- (e) Efficient irrigation systems; and
- (f) Storm drain system stenciling or signage.
- (2) **Site Design and Stormwater Treatment Requirements**
- (a) Require each Regulated Project to implement at least the following design strategies onsite:
- (i) Limit disturbance of natural water bodies and drainage systems; minimize compaction of highly permeable soils; protect slopes and channels; and minimize impacts from stormwater and urban runoff on the biological integrity of natural drainage systems and water bodies;
 - (ii) Conserve natural areas, including existing trees, other vegetation, and soils;
 - (iii) Minimize impervious surfaces;
 - (iv) Minimize disturbances to natural drainages; and
 - (v) Minimize stormwater runoff by implementing one or more of the following site design measures:
 - Direct roof runoff into cisterns or rain barrels for reuse.
 - Direct roof runoff onto vegetated areas.
 - Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.
 - Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.
 - Construct sidewalks, walkways, and/or patios with permeable surfaces.³
 - Construct driveways, bike lanes, and/or uncovered parking lots with permeable surfaces.³
- (b) Require each Regulated Project to treat 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area

with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility.

- (i) LID treatment measures are harvesting and re-use, infiltration, evapotranspiration, or biotreatment.
- (ii) A properly engineered and maintained biotreatment system may be considered only if it is infeasible to implement harvesting and re-use, infiltration, or evapotranspiration at a project site.
- (iii) Infeasibility to implement harvesting and re-use, infiltration, or evapotranspiration at a project site may result from conditions including the following:
 - Locations where seasonal high groundwater would be within 10 feet of the base of the LID treatment measure.
 - Locations within 100 feet of a groundwater well used for drinking water.
 - Development sites where pollutant mobilization in the soil or groundwater is a documented concern.
 - Locations with potential geotechnical hazards.
 - Smart growth and infill or redevelopment sites where the density and/or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.
 - Locations with tight clay soils that significantly limit the infiltration of stormwater.
- (iv) By May 1, 2011, the Permittees, collaboratively or individually, shall submit a report on the criteria and procedures the Permittees shall employ to determine when harvesting and re-use, infiltration, or evapotranspiration is feasible and infeasible at a Regulated Project site. This report shall, at a minimum, contain the information required in Provision C.3.c.iii.(1).
- (v) By December 1, 2013, the Permittees, collaboratively or individually, shall submit a report on their experience with determining infeasibility of harvesting and re-use, infiltration, or evapotranspiration at Regulated Project sites. This report shall, at a minimum, contain the information required in Provision C.3.iii.(2).
- (vi) Biotreatment (or bioretention) systems shall be designed to have a surface area no smaller than what is required to accommodate a 5 inches/hour stormwater runoff surface loading rate, and infiltrate runoff at a minimum of 5 inches per hour during the life of the facility. The soil media for biotreatment (or bioretention) systems shall be designed to sustain healthy, vigorous plant growth and maximize stormwater runoff retention and pollutant removal. Permittees shall ensure that Regulated

Projects use biotreatment soil media that meet the minimum specifications set forth in Attachment L.

- (vii) Green roofs may be considered biotreatment systems that treat roof runoff only if they meet certain minimum specifications. Permittees shall ensure that green roofs installed at Regulated Projects meet the following minimum specifications:
- The green roof system planting media shall be sufficiently deep to provide capacity within the pore space of the media for the required runoff volume specified by Provision C.3.d.i.(1).
 - The green roof system planting media shall be sufficiently deep to support the long term health of the vegetation selected for the green roof, as specified by a landscape architect or other knowledgeable professional.
- (c) Require any Regulated Project that does not comply with Provision C.3.c.i.(2)(b) above to meet the requirements established in Provision C.3.e for alternative compliance.

- ii. Implementation Level** – All elements of the tasks described in Provision C.3.c.i shall be fully implemented.

Due Date for Full Implementation – December 1, 2011

- (1) For any private development project for which a planning application has been deemed complete by a Permittee on or before the Permit effective date, Provision C.3.c.i shall not apply so long as the project applicant is diligently pursuing the project. Diligent pursuance may be demonstrated by the project applicant's submittal of supplemental information to the original application, plans, or other documents required for any necessary approvals of the project by the Permittee. If during the time period between the Permit effective date and the required implementation date of December 1, 2011, the project applicant has not taken any action to obtain the necessary approvals from the Permittee, the project will then be subject to the requirements of Provision C.3.c.i.
- (2) For any private development project with an application deemed complete after the Permit effective date, the requirements of Provision C.3.c.i shall not apply if the project applicant has received final discretionary approval for the project before the required implementation date of December 1, 2011.
- (3) For public projects for which funding has been committed and construction is scheduled to begin by December 1, 2012, the requirements of Provision C.3.c.i shall not apply.

iii. Reporting

- (1) Feasibility/Infeasibility Criteria Report - By May 1, 2011, the Permittees, collaboratively or individually, shall submit a report to the Water Board containing the following information:

- Literature review and discussion of documented cases/sites, particularly in the Bay Area and California, where infiltration, harvesting and reuse, or evapotranspiration have been demonstrated to be feasible and/or infeasible.
 - Discussion of proposed feasibility and infeasibility criteria and procedures the Permittees shall employ to make a determination of when biotreatment will be allowed at a Regulated Project site.
- (2) Status Report on Application of Feasibility/Infeasibility Criteria – By December 1, 2013, the Permittees shall submit a report to the Water Board containing the following information:
- Discussion of the most common feasibility and infeasibility criteria employed since implementation of Provision C.3.c requirements, including site-specific examples;
 - Discussion of barriers, including institutional and technical site specific constraints, to implementation of harvesting and reuse, infiltration, or evapotranspiration, and proposed strategies for removing these identified barriers;
 - If applicable, discussion of proposed changes to feasibility and infeasibility criteria and rationale for the changes; and
 - Guidance for the Permittees to make a consistent and appropriate determination of the feasibility of harvesting and reuse, infiltration, or evapotranspiration for each Regulated Project.
- (3) Report the method(s) of implementation of Provisions C.3.c.i above in the 2012 Annual Report. For specific tasks listed above that are reported using the reporting tables required for Provision C.3.b.v, a reference to those tables will suffice.

C.3.d. Numeric Sizing Criteria for Stormwater Treatment Systems

i. Task Description – The Permittees shall require that stormwater treatment systems constructed for Regulated Projects meet at least one of the following hydraulic sizing design criteria:

- (1) **Volume Hydraulic Design Basis** – Treatment systems whose primary mode of action depends on volume capacity shall be designed to treat stormwater runoff equal to:
- (a) The maximized stormwater capture volume for the area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients set forth in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998), pages 175–178 (e.g., approximately the 85th percentile 24-hour storm runoff event); or
 - (b) The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology set forth in Section 5 of the California Stormwater Quality Association’s

Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data.

- (2) **Flow Hydraulic Design Basis** – Treatment systems whose primary mode of action depends on flow capacity shall be sized to treat:
 - (a) 10 percent of the 50-year peak flowrate;
 - (b) The flow of runoff produced by a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depths; or
 - (c) The flow of runoff resulting from a rain event equal to at least 0.2 inches per hour intensity.
 - (3) **Combination Flow and Volume Design Basis** – Treatment systems that use a combination of flow and volume capacity shall be sized to treat at least 80 percent of the total runoff over the life of the project, using local rainfall data.
- ii. Implementation Level** – The Permittees shall immediately require the controls in this task.
- Due Date for Full Implementation** – Immediate, except December 1, 2010, for Vallejo Permittees.
- iii. Reporting** – Permittees shall use the reporting tables required in Provision C.3.b.v.
- iv. Limitations on Use of Infiltration Devices in Stormwater Treatment Systems**
- (1) For Regulated Projects, each Permittee shall review planned land use and proposed treatment design to verify that installed stormwater treatment systems with no under-drain, and that function primarily as infiltration devices, should not cause or contribute to the degradation of groundwater quality at project sites. An infiltration device is any structure that is deeper than wide and designed to infiltrate stormwater into the subsurface and, as designed, bypass the natural groundwater protection afforded by surface soil. Infiltration devices include dry wells, injection wells, and infiltration trenches (includes french drains).
 - (2) For any Regulated Project that includes plans to install stormwater treatment systems which function primarily as infiltration devices, the Permittee shall require that:
 - (a) Appropriate pollution prevention and source control measures are implemented to protect groundwater at the project site, including the inclusion of a minimum of two feet of suitable soil to achieve a maximum 5 inches/hour infiltration rate for the infiltration system;
 - (b) Adequate maintenance is provided to maximize pollutant removal capabilities;
 - (c) The vertical distance from the base of any infiltration device to the seasonal high groundwater mark is at least 10 feet. (Note that some

locations within the Permittees' jurisdictions are characterized by highly porous soils and/or high groundwater tables. In these areas, a greater vertical distance from the base of the infiltration device to the seasonal high groundwater mark may be appropriate, and treatment system approvals should be subject to a higher level of analysis that considers the potential for pollutants (such as from onsite chemical use), the level of pretreatment to be achieved, and other similar factors in the overall analysis of groundwater safety);

- (d) Unless stormwater is first treated by a method other than infiltration, infiltration devices are not approved as treatment measures for runoff from areas of industrial or light industrial activity; areas subject to high vehicular traffic (i.e., 25,000 or greater average daily traffic on a main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (e.g., bus, truck); nurseries; and other land uses that pose a high threat to water quality;
- (e) Infiltration devices are not placed in the vicinity of known contamination sites unless it has been demonstrated that increased infiltration will not increase leaching of contaminants from soil, alter groundwater flow conditions affecting contaminant migration in groundwater, or adversely affect remedial activities; and
- (f) Infiltration devices are located a minimum of 100 feet horizontally away from any known water supply wells, septic systems, and underground storage tanks with hazardous materials. (Note that some locations within the Permittees' jurisdictions are characterized by highly porous soils and/or high groundwater tables. In these areas, a greater horizontal distance from the infiltration device to known water supply wells, septic systems, or underground storage tanks with hazardous materials may be appropriate, and treatment system approvals should be subject to a higher level of analysis that considers the potential for pollutants (such as from onsite chemical use), the level of pretreatment to be achieved, and other similar factors in the overall analysis of groundwater safety).

C.3.e. Alternative or In-Lieu Compliance with Provision C.3.c.

- i. The Permittees may allow a Regulated Project to provide alternative compliance with Provision C.3.c in accordance with one of the two options listed below:

(1) Option 1: LID Treatment at an Offsite Location

Treat a portion of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility **and** treat the remaining portion of the Provision C.3.d runoff with LID treatment measures at an offsite project in the same watershed. The offsite LID treatment measures must provide hydraulically-sized treatment (in accordance with Provision C.3.d) of an equivalent quantity of both

stormwater runoff and pollutant loading and achieve a net environmental benefit.

(2) **Option 2: Payment of In-Lieu Fees**

Treat a portion of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility **and** pay equivalent in-lieu fees⁵ to treat the remaining portion of the Provision C.3.d runoff with LID treatment measures at a Regional Project.⁶ The Regional Project must achieve a net environmental benefit.

- (3) For the alternative compliance options described in Provision C.3.e.i.(1) and (2) above, offsite projects must be constructed by the end of construction of the Regulated Project. If more time is needed to construct the offsite project, for each additional year, up to three years, after the construction of the Regulated Project, the offsite project must provide an additional 10% of the calculated equivalent quantity of both stormwater runoff and pollutant loading. Regional Projects must be completed within three years after the end of construction of the Regulated Project. However, the timeline for completion of the Regional Project may be extended, up to five years after the completion of the Regulated Project, with prior Executive Officer approval. Executive Officer approval will be granted contingent upon a demonstration of good faith efforts to implement the Regional Project, such as having funds encumbered and applying for the appropriate regulatory permits.

ii. Special Projects

- (1) When considered at the watershed scale, certain land development projects characterized as smart growth, high density, or transit-oriented development can either reduce existing impervious surfaces, or create less "accessory" impervious areas and automobile-related pollutant impacts. Incentive LID Treatment Reduction Credits approved by the Water Board may be applied to these Special Projects, which are Regulated Projects that meet the specific criteria listed below in Provisions C.3.e.ii.(2),(3)&(4). For any Special Project, the allowable incentive LID Treatment Reduction Credit is the maximum percentage of the amount of runoff identified in Provision C.3.d. for the Special Project's drainage area, that may be treated with one or a combination of the following two types of non-LID treatment systems:
- Tree-box-type high flowrate biofilters
 - Vault-based high flowrate media filters

⁵ **In-lieu fees** – Monetary amount necessary to provide both hydraulically-sized treatment (in accordance with Provision C.3.d) with LID treatment measures of an equivalent quantity of stormwater runoff and pollutant loading, and a proportional share of the operation and maintenance costs of the Regional Project.

⁶ **Regional Project** – A regional or municipal stormwater treatment facility that discharges into the same watershed that the Regulated Project does.

The allowed LID Treatment Reduction Credit recognizes that density and space limitations for the Special Projects identified herein may make 100% LID treatment infeasible. Under Provision C.3.e.vi, each Permittee is required to report on the infeasibility of LID treatment for each of the Special Projects for which LID Treatment Reduction Credit was applied.

(2) Category A Special Project Criteria

- (a) To be considered a Category A Special Project, a Regulated Project must meet all of the following criteria:
- (i) Be built as part of a Permittee's stated objective to preserve or enhance a pedestrian-oriented type of urban design.
 - (ii) Be located in a Permittee's designated central business district, downtown core area or downtown core zoning district, neighborhood business district or comparable pedestrian-oriented commercial district, or historic preservation site and/or district.
 - (iii) Create and/or replace one half acre or less of impervious surface area.
 - (iv) Include no surface parking, except for incidental surface parking. Incidental surface parking is allowed only for emergency vehicle access, Americans with Disabilities Act (ADA) accessibility, and passenger and freight loading zones.
 - (v) Have at least 85% coverage for the entire project site by permanent structures. The remaining 15% portion of the site is to be used for safety access, parking structure entrances, trash and recycling service, utility access, pedestrian connections, public uses, landscaping, and stormwater treatment.
- (b) Any Category A Special Project may qualify for 100% LID Treatment Reduction Credit, which would allow the Category A Special Project to treat up to 100% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.

(3) Category B Special Project Criteria

- (a) To be considered a Category B Special Project, a Regulated Project must meet all of the following criteria:
- (i) Be built as part of a Permittee's stated objective to preserve or enhance a pedestrian-oriented type of urban design.
 - (ii) Be located in a Permittee's designated central business district, downtown core area or downtown core zoning district, neighborhood business district or comparable pedestrian-oriented commercial district, or historic preservation site and/or district.

- (iii) Create and/or replace greater than one-half acre but no more than 2 acres of impervious surface area.
 - (iv) Include no surface parking, except for incidental surface parking. Incidental surface parking is allowed only for emergency vehicle access, ADA accessibility, and passenger and freight loading zones.
 - (v) Have at least 85% coverage for the entire project site by permanent structures. The remaining 15% portion of the site is to be used for safety access, parking structure entrances, trash and recycling service, utility access, pedestrian connections, public uses, landscaping, and stormwater treatment.
- (b) For any Category B Special Project, the maximum LID Treatment Reduction Credit allowed is determined based on the density achieved by the Project in accordance with the criteria listed below. Density is expressed in Floor Area Ratios (FARs) for commercial and mixed-use development projects and in Dwelling Units per Acre (DU/Ac) for residential development projects.
- (i) 50% Maximum LID Treatment Reduction Credit
 - For any commercial or mixed use Category B Special Project with a FAR of at least 2:1, up to 50% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
 - For any residential Category B Special Project with a density of at least 50 DU/Ac, up to 50% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
 - (ii) 75% Maximum LID Treatment Reduction Credit
 - For any commercial or mixed use Category B Special Project with a FAR of at least 3:1, up to 75% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
 - For any residential Category B Special Project with a density of at least 75 DU/Ac, up to 75% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
 - (iii) 100% Maximum LID Treatment Reduction Credit
 - For any commercial or mixed use Category B Special Project with a FAR of at least 4:1, up to 100% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may

- be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- For any residential Category B Special Project with a density of at least 100 DU/Ac, up to 100% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- (4) Category C Special Project Criteria (Transit-Oriented Development)
- (a) Transit-Oriented Development refers to the clustering of homes, jobs, shops and services in close proximity to rail stations, ferry terminals or bus stops offering access to frequent, high-quality transit services. This pattern typically involves compact development and a mixing of different land uses, along with amenities like pedestrian-friendly streets. To be considered a Category C Special Project, a Regulated Project must meet all of the following criteria:
- (i) Be characterized as a non auto-related land use project. That is, Category C specifically excludes any Regulated Project that is a stand-alone surface parking lot; car dealership; auto and truck rental facility with onsite surface storage; fast-food restaurant, bank or pharmacy with drive-through lanes; gas station, car wash, auto repair and service facility; or other auto-related project unrelated to the concept of Transit-Oriented Development.
- (ii) If a commercial or mixed-use development project, achieve at least an FAR of 2:1.
- (iii) If a residential development project, achieve at least a density of 25 DU/Ac.
- (b) For any Category C Special Project, the total maximum LID Treatment Reduction Credit allowed is the sum of three different types of credits that the Category C Special Project may qualify for, namely: Location, Density and Minimized Surface Parking Credits.
- (c) Location Credits
- (i) A Category C Special Project may qualify for the following Location Credits:
- 50% Location Credit: Located within a ¼ mile radius of an existing or planned transit hub.
 - 25% Location Credit: Located within a ½ mile radius of an existing or planned transit hub.
 - 25% Location Credit: Located within a planned Priority Development Area (PDA), which is an infill development area formally designated by the Association of Bay Area Government's / Metropolitan Transportation Commission's FOCUS regional planning program. FOCUS is a regional

- incentive-based development and conservation strategy for the San Francisco Bay Area.
- (ii) Only one Location Credit may be used by an individual Category C Special Project, even if the project qualifies for multiple Location Credits.
 - (iii) At least 50% or more of a Category C Special Project's site must be located within the $\frac{1}{4}$ or $\frac{1}{2}$ mile radius of an existing or planned transit hub to qualify for the corresponding Location Credits listed above. One hundred percent of a Category C Special Project's site must be located within a PDA to qualify for the corresponding Location Credit listed above.
 - (iv) Transit hub is defined as a rail, light rail, or commuter rail station, ferry terminal, or bus transfer station served by three or more bus routes (i.e., a bus stop with no supporting services does not qualify). A planned transit hub is a station on the MTC's Regional Transit Expansion Program list, per MTC's Resolution 3434 (revised April 2006), which is a regional priority funding plan for future transit stations in the San Francisco Bay Area.
- (d) Density Credits: To qualify for any Density Credits, a Category C Special Project must first qualify for one of the Location Credits listed in Provision C.3.e.ii.(4)(c) above.
- (i) A Category C Special Project that is a commercial or mixed-use development project may qualify for the following Density Credits:
 - 10% Density Credit: Achieve an FAR of at least 2:1.
 - 20% Density Credit: Achieve an FAR of at least 4:1.
 - 30% Density Credit: Achieve an FAR of at least 6:1.
 - (ii) A Category C Special Project that is a residential development project may qualify for the following Density Credits:
 - 10% Density Credit: Achieve a density of at least 30 DU/Ac.
 - 20% Density Credit: Achieve a density of at least 60 DU/Ac.
 - 30% Density Credit: Achieve a density of at least 100 DU/Ac.
 - (iii) Commercial and mixed-use Category C Projects do not qualify for Density Credits based on DU/Ac and residential Category C Projects do not qualify for Density Credits based on FAR.
 - (iv) Only one Density Credit may be used by an individual Category C Special Project, even if the project qualifies for multiple Density Credits.
- (e) Minimized Surface Parking Credits: To qualify for any Minimized Surface Parking Credits, a Category C Special Project must first

qualify for one of the Location Credits listed in Provision C.3.e.ii.(4)(c) above.

- (i) A Category C Special Project may qualify for the following Minimized Surface Parking Credits:
 - 10% Minimized Surface Parking Credit: Have 10% or less of the total post-project impervious surface area dedicated to at-grade surface parking. The at-grade surface parking must be treated with LID treatment measures.
 - 20% Minimized Surface Parking Credit: Have no surface parking except for incidental surface parking. Incidental surface parking is allowed only for emergency vehicle access, ADA accessibility, and passenger and freight loading zones.
 - (ii) Only one Minimized Surface Parking Credit may be used by an individual Category C Special Project, even if the project qualifies for multiple Minimized Surface Parking Credits.
- (5) Any Regulated Project that meets all the criteria for multiple Special Projects Categories (i.e., a Regulated Project that may be characterized as a Category B or C Special Project) may only use the LID Treatment Reduction Credit allowed under one of the Special Projects Categories (i.e., a Regulated Project that may be characterized as a Category B or C Special Project may use the LID Treatment Reduction Credit allowed under Category B or Category C, but not the sum of both.)

iii. Effective Date – December 1, 2011.

iv. Implementation Level

- (1) For any private development project for which a planning application has been deemed complete by a Permittee on or before the Permit effective date, Provisions C.3.e.i-ii shall not apply so long as the project applicant is diligently pursuing the project. Diligent pursuance may be demonstrated by the project applicant's submittal of supplemental information to the original application, plans, or other documents required for any necessary approvals of the project by the Permittee. If during the time period between the Permit effective date and the required implementation date of December 1, 2011, the project applicant has not taken any action to obtain the necessary approvals from the Permittee, the project will then be subject to the requirements of Provision C.3.e.i-ii.
- (2) For public projects for which funding has been committed and construction is scheduled to begin by December 1, 2012, the requirements of Provisions C.3.e.i-ii shall not apply.
- (3) Provisions C.3.e.i-ii supersede any Alternative Compliance Policies previously approved by the Executive Officer

- (4) For all offsite projects and Regional Projects installed in accordance with Provision C.3.e.i-ii, the Permittees shall meet the Operation & Maintenance (O&M) requirements of Provision C.3.h.

- v. **Reporting** –The Permittees shall submit the ordinance/legal authority and procedural changes made, if any, to implement Provision C.3.e with their 2012 Annual Report. Annual reporting thereafter shall be done in conjunction with reporting requirements under Provision C.3.b.v.

Any Permittee choosing to require 100% LID treatment onsite for all Regulated Projects and not allow alternative compliance under Provision C.3.e, shall include a statement to that effect in the 2012 Annual Report and all subsequent Annual Reports.

- vi. **Reporting on Special Projects**

- (1) Beginning December 1, 2011, Permittees shall track any identified potential Special Projects that have submitted planning applications but that have not received final discretionary approval.
- (2) By March 15 and September 15 of each year, Permittees shall report to the Water Board on these tracked potential Special Projects using Table 3.1 found at the end of Provision C.3. All the required column entry information listed in Table 3.1 shall be reported for each potential Special Project. Any Permittee with no potential Special Projects shall so state.

For each Special Project listed in Table 3.1, Permittees shall include a narrative discussion of the feasibility or infeasibility of 100% LID treatment, onsite and offsite. Both technical and economic feasibility or infeasibility shall be discussed, as applicable. The discussion shall also contain enough technical and/or economic detail to document the basis of infeasibility used.

- (3) Once a Special Project has final discretionary approval, it shall be reported in the Provision C.3.b. Reporting Table in the same reporting year that the project was approved. In addition to the column entries contained in the Provision C.3.b. Reporting Table, the Permittees shall provide the following supplemental information for each approved Special Project:
 - (a) Submittal Date: Date that a planning application for the Special Project was submitted.
 - (b) Description: Type of project, number of floors, number of units (commercial, mixed-use, residential), type of parking, and other relevant information.
 - (c) Site Acreage: Total site area in acres.
 - (d) Density in DU/Ac: Number of dwelling units per acre.
 - (e) Density in FAR: Floor Area Ratio
 - (f) Special Project Category: For each applicable Special Project Category, list the specific criteria applied to determine applicability. For each non-applicable Special Project Category, indicate n/a.

- (g) LID Treatment Reduction Credit Available: For each applicable Special Project Category, state the maximum total LID Treatment Reduction Credit applied. For Category C Special Projects also list the individual Location, Density, and Minimized Surface Parking Credits applied.
- (h) List of Stormwater Treatment Systems: List all LID stormwater treatment systems approved. For each type of LID treatment system, indicate the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area that will be treated.
- (i) List of Non-LID Stormwater Treatment Systems: List all non-LID stormwater treatment systems approved. For each type of non-LID treatment system, indicate: (1) the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area, and (2) whether the treatment system either meets minimum design criteria published by a government agency or received certification issued by a government agency, and reference the applicable criteria or certification.

C.3.f. Alternative Certification of Stormwater Treatment Systems

- i. Task Description** – In lieu of reviewing a Regulated Project's adherence to Provision C.3.d, a Permittee may elect to have a third party conduct detailed review and certify the Regulated Project's adherence to Provision C.3.d. The third party reviewer must be a Civil Engineer or a Licensed Architect or Landscape Architect registered in the State of California, or staff of another Permittee subject to the requirements of this Permit.
- ii. Implementation Level** – Any Permittee accepting third-party reviews must make a reasonable effort to ensure that the third party has no conflict of interest with regard to the Regulated Project in question. That is, any consultant or contractor (or his/her employees) hired to design and/or construct a stormwater treatment system for a Regulated Project shall not also be the certifying third party. The Permittee must verify that the third party certifying any Regulated Project has current training on stormwater treatment system design (within three years of the certification signature date) for water quality and understands the groundwater protection principles applicable to Regulated Project sites.

Training conducted by an organization with stormwater treatment system design expertise (such as a college or university, the American Society of Civil Engineers, American Society of Landscape Architects, American Public Works Association, California Water Environment Association (CWEA), BASMAA, National Association of Flood & Stormwater Management Agencies, California Stormwater Quality Association (CASQA), or the equivalent, may be considered qualifying training.

- iii. Reporting** – Projects reviewed by third parties shall be noted in reporting tables for Provision C.3.b.

C.3.g. Hydromodification Management

i. **Hydromodification Management (HM) Projects** are Regulated Projects that create and/or replace one acre or more of impervious surface and are not specifically excluded within the requirements of Attachments B–F. A project that does not increase impervious surface area over the pre-project condition is not an HM Project. All HM Projects shall meet the Hydromodification Management Standard of Provision C.3.g.ii.

ii. **HM Standard**

Stormwater discharges from HM Projects shall not cause an increase in the erosion potential of the receiving stream over the pre-project (existing) condition. Increases in runoff flow and volume shall be managed so that post-project runoff shall not exceed estimated pre-project rates and durations, where such increased flow and/or volume is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force. The demonstration that post-project stormwater runoff does not exceed estimated pre-project runoff rates and durations shall include the following:

- (1) **Range of Flows to Control:** For Alameda, Contra Costa, San Mateo, and Santa Clara Permittees, HM controls shall be designed such that post-project stormwater discharge rates and durations match pre-project discharge rates and durations from 10 % of the pre-project 2-year peak flow⁷ up to the pre-project 10-year peak flow. For Fairfield-Suisun Permittees, HM controls shall be designed such that post-project stormwater discharge rates and durations shall match from 20 percent of the 2-year peak flow up to the pre-project 10-year peak flow. Contra Costa Permittees, when using pre-sized and pre-designed Integrated Management Practices (IMPs) per Attachment C of this Order, are not required to meet the low-flow criterion of 10% of the 2-year peak flow. These IMPs are designed to control 20% of the 2-year peak flow. After the Contra Costa Permittees conduct the required monitoring specified in Attachment C, the design of these IMPs will be reviewed.
- (2) **Goodness of Fit Criteria:** The post-project flow duration curve shall not deviate above the pre-project flow duration curve by more than 10 percent over more than 10 percent of the length of the curve corresponding to the range of flows to control.
- (3) **Precipitation Data:** Precipitation data used in the modeling of HM controls shall, at a minimum, be 30 years of hourly rainfall data

⁷ Where referred to in this Order, the 2-year peak flow is determined using a flood frequency analysis based on USGS Bulletin 17 B to obtain the peak flow statistically expected to occur at a 2-year recurrence interval. In this analysis, the appropriate record of hourly rainfall data (e.g., 35-50 years of data) is run through a continuous simulation hydrologic model, the annual peak flows are identified, rank ordered, and the 2-year peak flow is estimated. Such models include USEPA's Hydrologic Simulation Program—Fortran (HSPF), U.S. Army Corps of Engineers' Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS), and USEPA's Storm Water Management Model (SWMM).

representative of the area being modeled. Where a longer rainfall record is available, the longer record shall be used.

- (4) **Calculating Post-Project Runoff:** Retention and detention basins shall be considered impervious surfaces for purposes of calculating post-project runoff. Pre- and post-project runoff shall be calculated and compared for the entire site, without separating or excluding areas that may be considered self-retaining.
- (5) **Existing HM Control Requirements:** The Water Board has adopted HM control requirements for all Permittees (except for the Vallejo Permittees), and these adopted requirements are attached to this Order as listed below. The Permittees shall comply with all requirements in their own Permittee-specific Attachment, unless otherwise specified by this Order. In all cases, the HM Standard shall be achieved.
 - Attachment B for Alameda Permittees
 - Attachment C for Contra Costa Permittees
 - Attachment D for Fairfield-Suisun Permittees
 - Attachment E for San Mateo Permittees
 - Attachment F for Santa Clara Permittees

iii. Types of HM Controls

Projects shall meet the HM Standard using any of the following HM controls or a combination thereof.

- (1) **Onsite HM controls** are flow duration control structures and hydrologic source controls that collectively result in the HM Standard being met at the point(s) where stormwater runoff discharges from the project site.
- (2) **Regional HM controls** are flow duration control structures that collect stormwater runoff discharge from multiple projects (each of which shall incorporate hydrologic source control measures as well) and are designed such that the HM Standard is met for all the projects at the point where the regional HM control discharges.
- (3) **In-stream measures** shall be an option only where the stream, which receives runoff from the project, is already impacted by erosive flows and shows evidence of excessive sediment, erosion, deposition, or is a hardened channel.

In-stream measures involve modifying the receiving stream channel slope and geometry so that the stream can convey the new flow regime without increasing the potential for erosion and aggradation. In-stream measures are intended to improve long-term channel stability and prevent erosion by reducing the erosive forces imposed on the channel boundary.

In-stream measures, or a combination of in-stream and onsite controls, shall be designed to achieve the HM Standard from the point where the project(s) discharge(s) to the stream to the mouth of the stream or to achieve an equivalent degree of flow control mitigation (based on amount

of impervious surface mitigated) as part of an in-stream project located in the same watershed. Designing in-stream controls requires a hydrologic and geomorphic evaluation (including a longitudinal profile) of the stream system downstream and upstream of the project. As with all in-stream activities, other regulatory permits must be obtained by the project proponent.⁸

iv. Reporting

For each HM Project approved during the reporting period, the following information shall be reported electronically in tabular form. This information shall be added to the required reporting information specified in Provision C.3.b.v.

- (1) Device(s) or method(s) used to meet the HM Standard, such as detention basin(s), bioretention unit(s), regional detention basin, or in-stream control;
- (2) Method used by the project proponent to design and size the device or method used to meet the HM Standard; and
- (3) Other information as required in the Permittee's existing HM requirements, as shown in Attachments B–F.

v. Vallejo Permittees shall complete the following tasks in lieu of complying with Provisions C.3.g.i-iv.

- (1) Develop a Hydrograph Modification Management Plan (HMP) for meeting the requirements of Provisions C.3.g.i–iv. The Vallejo Permittees' HMP shall be subject to approval by the Water Board.
- (2) Vallejo Permittees shall include the following in their HMP:
 - (a) A map of the City of Vallejo, delineating areas where the HM Standard applies. The HM Standard shall apply in all areas except where a project:
 - discharges stormwater runoff into creeks or storm drains that are concrete-lined or significantly hardened (e.g., with rip-rap, sackrete) downstream to their outfall in San Francisco Bay;
 - discharges to an underground storm drain discharging to the Bay; or
 - is located in a highly developed watershed.⁹

However, plans to restore a creek reach may reintroduce the applicability of HM controls, and would need to be addressed in the HMP;

⁸ In-stream control projects require a Stream Alteration Agreement from the California Department of Fish & Game, a CWA section 404 permit from the U.S. Army Corps of Engineers, and a section 401 certification from the Water Board. Early discussions with these agencies on the acceptability of an in-stream modification are necessary to avoid project delays or redesign.

⁹ Within the context of Provision C.3.g., "highly developed watersheds" refers to catchments or subcatchments that are 65% impervious or more.

- (b) A thorough technical description of the methods project proponents may use to meet the HM Standard. Vallejo Permittees shall use the same methodologies, or similar methodologies, to those already in use in the Bay Area to meet the HM Standard. Contra Costa sizing charts may be used on projects up to ten acres after any necessary modifications are made to the sizes to control runoff rates and durations from ten percent of the pre-project 2-year peak flow to the pre-project 10-year peak flow, and adjustments are made for local rainfall and soil types;
 - (c) A description of any land use planning measures the City of Vallejo will take (e.g., stream buffers and stream restoration activities, including restoration-in-advance of floodplains, revegetation, and use of less-impacting facilities at points of discharge) to allow expected changes in stream channel cross sections, stream vegetation, and discharge rates, velocities, and/or durations without adverse impacts on stream beneficial uses;
 - (d) A description of how the Vallejo Permittees will incorporate these requirements into their local approval processes, and a schedule for doing so; and
 - (e) Guidance for City of Vallejo project proponents explaining how to meet the HM Standard.
- (3) Vallejo Permittees shall complete the HMP according to the schedule below. All required documents shall be submitted acceptable to the Executive Officer, except the HMP, which shall be submitted to the Water Board for approval. Vallejo Permittees shall report on the status of HMP development and implementation in each Annual Report and shall also provide a summary of projects incorporating measures to address Provision C.3.g and the measures used.
- By April 1, 2011, submit a detailed workplan and schedule for completion of the information required in Provision C.3.g.v.(2).
 - By December 1, 2011, submit the map required in Provision C.3.g.v.(2)(a).
 - By April 1, 2012, submit a draft HMP.
 - By December 1, 2012, provide responses to Water Board comments on the draft HMP so that the final HMP is submitted for Water Board approval by July 1, 2013.
 - Upon adoption by the Water Board, implement the HMP, which shall include the requirements of this measure. Before approval of the HMP by the Water Board, Vallejo Permittees shall encourage early implementation of measures likely to be included in the HMP.

C.3.h. Operation and Maintenance of Stormwater Treatment Systems

- i. Task Description** – Each Permittee shall implement an Operation and Maintenance (O&M) Verification Program.
- ii. Implementation Level** – At a minimum, the O&M Verification Program shall include the following elements:
 - (1) Conditions of approval or other legally enforceable agreements or mechanisms for all Regulated Projects that, at a minimum, require at least one of the following from all project proponents and their successors in control of the Project or successors in fee title:
 - (a) The project proponent’s signed statement accepting responsibility for the O&M of the installed onsite, joint, and/or offsite stormwater treatment system(s) and HM control(s) (if any) until such responsibility is legally transferred to another entity;
 - (b) Written conditions in the sales or lease agreements or deed for the project that requires the buyer or lessee to assume responsibility for the O&M of the onsite, joint, and/or offsite installed stormwater treatment system(s) and HM control(s) (if any) until such responsibility is legally transferred to another entity;
 - (c) Written text in project deeds, or conditions, covenants and restrictions (CCRs) for multi-unit residential projects that require the homeowners association or, if there is no association, each individual owner to assume responsibility for the O&M of the installed onsite, joint, and/or offsite stormwater treatment system(s) and HM control(s) (if any) until such responsibility is legally transferred to another entity; or
 - (d) Any other legally enforceable agreement or mechanism, such as recordation in the property deed, that assigns the O&M responsibility for the installed onsite, joint, and/or offsite treatment system(s) and HM control(s) (if any) to the project owner(s) or the Permittee.
 - (2) Coordination with the appropriate mosquito and vector control agency with jurisdiction to establish a protocol for notification of installed stormwater treatment systems and HM controls.
 - (3) Conditions of approval or other legally enforceable agreements or mechanisms for all Regulated Projects that require the granting of site access to all representatives of the Permittee, local mosquito and vector control agency staff, and Water Board staff, for the sole purpose of performing O&M inspections of the installed stormwater treatment system(s) and HM control(s) (if any).
 - (4) A written plan and implementation of the plan that describes O&M (including inspection) of all Regional Projects and regional HM controls that are Permittee-owned and/or operated.
 - (5) A database or equivalent tabular format of all Regulated Projects (public and private) that have installed onsite, joint, and/or offsite stormwater

treatment systems. This database or equivalent tabular format shall include the following information for each Regulated Project:

- (a) Name and address of the Regulated Project;
 - (b) Specific description of the location (or a map showing the location) of the installed stormwater treatment system(s) and HM control(s) (if any);
 - (c) Date(s) that the treatment system(s) and HM controls (if any) is/are installed;
 - (d) Description of the type and size of the treatment system(s) and HM control(s) (if any) installed;
 - (e) Responsible operator(s) of each treatment system and HM control (if any);
 - (f) Dates and findings of inspections (routine and follow-up) of the treatment system(s) and HM control(s) (if any) by the Permittee; and
 - (g) Any problems and corrective or enforcement actions taken.
- (6) A prioritized plan for inspecting all installed stormwater treatment systems and HM controls. At a minimum, this prioritized plan must specify the following for each fiscal year:
- (a) Inspection by the Permittee of all newly installed stormwater treatment systems and HM controls within 45 days of installation to ensure approved plans have been followed;
 - (b) Inspection by the Permittee of at least 20 percent of the total number (at the end of the preceding fiscal year) of installed stormwater treatment systems and HM controls;
 - (c) Inspection by the Permittee of at least 20 percent of the total number (at the end of the preceding fiscal year) of installed vault-based systems; and
 - (d) Inspection by the Permittee of all installed stormwater treatment systems subject to Provision C.3, at least once every five years.

iii. Maintenance Approvals: The Permittees shall ensure that onsite, joint, and offsite stormwater treatment systems and HM controls installed by Regulated Projects are properly operated and maintained for the life of the projects. In cases where the responsible party for a stormwater treatment system or HM control has worked diligently and in good faith with the appropriate State and federal agencies to obtain approvals necessary to complete maintenance activities for the treatment system or HM control, but these approvals are not granted, the Permittees shall be deemed to be in compliance with this Provision. Permittees shall ensure that constructed wetlands installed by Regulated Projects and used for urban runoff treatment shall abide by the Water Board's Resolution No. 94-102: Policy on the Use of Constructed Wetlands for Urban Runoff Pollution Control and the O&M requirements contained therein.

Due Date for Full Implementation: Immediate for Provisions C.3.h.i, C.3.h.ii.(1), and C.3.h.iii, and December 1, 2010, for Provisions C.3.h.ii.(2)-(6). For Vallejo Permittees: December 1, 2010, for Provisions C.3.h.i-iii.

iv. Reporting: Beginning with the 2010 Annual Report

- (1) For each Regulated Project inspected during the reporting period (fiscal year) the following information shall be reported to the Water Board electronically in tabular form as part of the Annual Report (as set forth in the Provision C.3.h. Sample Reporting Table attached):
 - Name of facility/site inspected.
 - Location (street address) of facility/site inspected.
 - Name of responsible operator for installed stormwater treatment systems and HM controls.
 - For each inspection:
 - Date of inspection.
 - Type of inspection (e.g., initial, annual, follow-up, spot).
 - Type(s) of stormwater treatment systems inspected (e.g., swale, bioretention unit, tree well, etc.) and an indication of whether the treatment system is an onsite, joint, or offsite system.
 - Type of HM controls inspected.
 - Inspection findings or results (e.g., proper installation, proper operation and maintenance, system not operating properly because of plugging, bypass of stormwater because of improper installation, maintenance required immediately, etc.).
 - Enforcement action(s) taken, if any (e.g., verbal warning, notice of violation, administrative citation, administrative order).
- (2) On an annual basis, before the wet season, provide a list of newly installed (installed within the reporting period) stormwater treatment systems and HM controls to the local mosquito and vector control agency and the Water Board. This list shall include the facility locations and a description of the stormwater treatment measures and HM controls installed.
- (3) Each Permittee shall report the following information in the Annual Report each year:
 - (a) A discussion of the inspection findings for the year and any common problems encountered with various types of treatment systems and/or HM controls. This discussion should include a general comparison to the inspection findings from the previous year.
 - (b) A discussion of the effectiveness of the Permittee's O&M Program and any proposed changes to improve the O&M Program (e.g., changes in prioritization plan or frequency of O&M inspections, other changes to improve effectiveness of program).

C.3.i. Required Site Design Measures for Small Projects and Detached Single-Family Home Projects

i. Task Description – The Permittees shall require all development projects, which create and/or replace ≥ 2500 ft² to $< 10,000$ ft² of impervious surface, and detached single-family home projects,¹⁰ which create and/or replace 2,500 square feet or more of impervious surface, to install one or more of the following site design measures:

- Direct roof runoff into cisterns or rain barrels for reuse.
- Direct roof runoff onto vegetated areas.
- Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.
- Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.
- Construct sidewalks, walkways, and/or patios with permeable surfaces.³
- Construct bike lanes, driveways, and/or uncovered parking lots with permeable surfaces.³

This provision applies to all development projects that require approvals and/or permits issued under the Permittee's' planning, building, or other comparable authority.

ii. Implementation Level – All elements of this task shall be fully implemented by December 1, 2012.

iii. Reporting – On an annual basis, discuss the implementation of the requirements of Provision C.3.i, including ordinance revisions, permit conditions, development of standard specifications and/or guidance materials, and staff training.

iv. Task Description – The Permittees shall develop standard specifications for lot-scale site design and treatment measures (e.g., for roof runoff and paved areas) as a resource for single-family homes and small development projects.

v. Implementation Level – This task may be fulfilled by the Permittees cooperating on a countywide or regional basis.

Due Date for Full Implementation – December 1, 2012.

vi. Reporting – A report containing the standard specifications for lot-scale treatment BMPs shall be submitted by December 1, 2012.

¹⁰ **Detached single-family home project** – The building of one single new house or the addition and/or replacement of impervious surface to one single existing house, which is not part of a larger plan of development.

Table 3.1 Standard Tracking and Reporting Form for Potential Special Projects

Project Name and No.	Permittee	Address	Application Submittal Date	Description	Site Total Acreage	Density DU/Ac	Density FAR	Special Project Category	LID Treatment Reduction Credit Available	List of LID Stormwater Treatment Systems	List of Non-LID Stormwater Treatment Systems
								Category A: Category B: Category C: Location: Density: Parking:	Category A: Category B: Category C: Location: Density: Parking:	Indicate each type of LID treatment system and the percentage of total runoff treated	Indicate each type of non-LID treatment system and the percentage of total runoff treated. Indicate whether minimum design criteria met or certification received (see footnotes).

Project Name and No: Name of the Special Project and Project No. (if applicable)

Permittee: Name of the Permittee in whose jurisdiction the Special Project will be built.

Address: Address of the Special Project; if no street address, state the cross streets.

Submittal Date: Date that a planning application for the Special Project was submitted; if a planning application has not been submitted, include a projected application submittal date.

Description: Type of project (commercial, mixed-use, residential), number of floors, number of units, type of parking, and other relevant information.

Site Acreage: Total site area in acres.

Density in DU/Ac: Number of dwelling units per acre.

Density in FAR: Floor Area Ratio

Special Project Category: For each applicable Special Project Category, list the specific criteria applied to determine applicability. For each non-applicable Special Project Category, indicate n/a.

LID Treatment Reduction Credit Available: For each applicable Special Project Category, state the maximum total LID Treatment Reduction Credit available. For Category C Special Projects also list the individual Location, Density, and Minimized Surface Parking Credits available.

List of LID Stormwater Treatment Systems: List all LID stormwater treatment systems proposed. For each type, indicate the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area.

List of Non-LID Stormwater Treatment Systems: List all non-LID stormwater treatment systems proposed. For each type, indicate the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area. For each type of non-LID treatment system, indicate: (1) the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area, and (2) whether the treatment system either meets minimum design criteria published by a government agency or received certification issued by a government agency, and reference the applicable criteria or certification.

C.4. Industrial and Commercial Site Controls

Each Permittee shall implement an industrial and commercial site control program at all sites which could reasonably be considered to cause or contribute to pollution of stormwater runoff, with inspections and effective follow-up and enforcement to abate actual or potential pollution sources consistent with each Permittee's respective Enforcement Response Plan (ERP), to prevent discharge of pollutants and impacts on beneficial uses of receiving waters. Inspections shall confirm implementation of appropriate and effective BMPs and other pollutant controls by industrial and commercial site operators.

C.4.a. Legal Authority for Effective Site Management

- i.** Task Description – Permittees shall have sufficient legal enforcement authority to obtain effective stormwater pollutant control on industrial sites. Permittees shall have the ability to inspect and require effective stormwater pollutant control and to escalate progressively stricter enforcement to achieve expedient compliance and pollutant abatement at commercial and industrial sites within their jurisdiction.

- ii. Implementation Level**

- (1) Permittees shall have the legal authority to oversee, inspect, and require expedient compliance and pollution abatement at all industrial and commercial sites which may be reasonably considered to cause or contribute to pollution of stormwater runoff. Permittees shall have the legal authority to require implementation of appropriate BMPs at industrial and commercial to address pollutant sources associated with outdoor process and manufacturing areas, outdoor material storage areas, outdoor waste storage and disposal areas, outdoor vehicle and equipment storage and maintenance areas, outdoor parking areas and access roads, outdoor wash areas, outdoor drainage from indoor areas, rooftop equipment, and contaminated and erodible surface areas, and other sources determined by the Permittees or Water Board Executive Officer to have a reasonable potential to contribute to pollution of stormwater runoff.
- (2) Permittees shall notify the discharger of any actual or potential pollutant sources and violations and require problem correction within a reasonably short and expedient time frame commensurate with the threat to water quality. Permittees shall require timely correction of problems involving rapid temporary repair, and may allow longer time periods for implementation of more permanent solutions, if these require significant capital expenditure or construction. Violations shall be corrected prior to the next rain event or within 10 business days after the violations are noted. If more than 10 business days are required for correction, a rationale shall be given in the tabulated sheets.

C.4.b. Industrial and Commercial Business Inspection Plan (Inspection Plan)

- i. Task Description – Permittees shall develop and implement an inspection plan that will serve as a prioritized inspection workplan. This inspection plan will allow inspection staff to categorize the commercial and industrial sites within the Permittee’s jurisdiction by pollutant threat and inspection frequency, change inspection frequency based on site performance, and add and remove sites as businesses open and close.

The Inspection Plan shall contain the following information:

- (1) Total number and a list of industrial and commercial facilities requiring inspection, within each Permittee’s jurisdiction, to be determined on the basis of a prioritization criteria designed to assign a more frequent inspection schedule to the highest priority facilities per Section C.4.b.ii. below.
 - (2) A description of the process for prioritizing inspections and frequency of inspections. If any geographical areas are to be targeted for inspections due to high potential for stormwater pollution, these areas should be indicated in the Inspection Plan. A mechanism to include newly opened businesses that warrant inspection shall be included.
- ii. Implementation Level – Each Permittee shall annually update and maintain a list of industrial and commercial facilities in the Inspection Plan to inspect that could reasonably be considered to cause or contribute to pollution of stormwater runoff. The following are some of the functional aspects of businesses and types of businesses that shall be included in the Inspection Plans:
 - (1) Sites that include the following types of functions that may produce pollutants when exposed to stormwater include, but are not limited to:
 - (a) Outdoor process and manufacturing areas
 - (b) Outdoor material storage areas
 - (c) Outdoor waste storage and disposal areas
 - (d) Outdoor vehicle and equipment storage and maintenance areas
 - (e) Outdoor wash areas
 - (f) Outdoor drainage from indoor areas
 - (g) Rooftop equipment
 - (h) Other sources determined by the Permittee or Water Board to have a reasonable potential to contribute to pollution of stormwater runoff
 - (2) The following types of Industrial and Commercial businesses that have a reasonable likelihood to be sources of pollutants to stormwater and non-stormwater discharges:
 - (a) Industrial facilities, as defined at 40 CFR 122.26(b)(14), including those subject to the State General NPDES Permit for Stormwater Discharges Associated with Industrial Activity (hereinafter the Industrial General Permit);

- (b) Vehicle Salvage yards;
 - (c) Metal and other recycled materials collection facilities, waste transfer facilities;
 - (d) Vehicle mechanical repair, maintenance, fueling, or cleaning;
 - (e) Building trades central facilities or yards, corporation yards;
 - (f) Nurseries and greenhouses;
 - (g) Building material retailers and storage;
 - (h) Plastic manufacturers; and
 - (i) Other facilities designated by the Permittee or Water Board to have a reasonable potential to contribute to pollution of stormwater runoff.
- (3) **Prioritization of Facilities**
Facilities of the types described in Provision 4.b.ii.(2) above and identified by the Permittees as having the reasonable potential to contribute to pollution of stormwater runoff shall be prioritized on the basis of the potential for water quality impact using criteria such as pollutant sources on site, pollutants of concern, proximity to a waterbody, violation history of the facility, and other relevant factors.
- (4) **Types/Contents of Inspections**
Each Permittee shall conduct inspections to determine compliance with its ordinances and this Permit. Inspections shall include but not be limited to the following:
- (a) Prevention of stormwater runoff pollution or illicit discharge by implementing appropriate BMPs;
 - (b) Visual observations for evidence of unauthorized discharges, illicit connections, and potential discharge of pollutants to stormwater;
 - (c) Noncompliance with Permittee ordinances and other local requirements; and
 - (d) Verification of coverage under the Industrial General Permit, if applicable.
- (5) **Inspection Frequency** – Permittees shall establish appropriate inspection frequencies for facilities based on Provision 4.b.ii (3) priority, potential for contributing pollution to stormwater runoff, and commensurate with the threat to water quality.
- (6) **Record Keeping** – For each facility identified in Provision 4.b.ii, the Permittee shall maintain a database or equivalent of the following information at a minimum:
- (a) Name and address of the business and local business operator;
 - (b) A brief description of business activity including SIC code;
 - (c) Inspection priority and inspection frequency; and
 - (d) If coverage under the Industrial General Permit is required.

iii. Reporting – The Permittees shall include the following in the Annual Report:

- (1) The list of facilities identified in Provision 4.b.ii in the 2010 Annual Report and revisions or updates in subsequent annual reports; and
- (2) The list of facilities scheduled for inspection during the current fiscal year.

C.4.c. Enforcement Response Plan (ERP)

- i. Task Description – Permittees shall develop and implement an ERP that will serve as a reference document for inspection staff to take consistent actions to achieve timely and effective compliance from all commercial and industrial site operators.
- ii. Implementation Level – The ERP shall contain the following:
 - (1) **Required enforcement actions** – including timeframes for corrections of problems – for various field violation scenarios. The ERP will provide guidance on appropriate use of the various enforcement tools, such as verbal and written notices of violation, citations, cleanup requirements, administrative and criminal penalties.
 - (2) **Timely Correction of Violations** – All violations must be corrected in a timely manner with the goal of correcting them before the next rain event but no longer than 10 business days after the violations are discovered. If more than 10 business days are required for compliance, a rationale shall be recorded in the electronic database or equivalent tabular system.
A description of the Permittee’s procedures for follow-up inspections and enforcement actions or referral to another agency, including appropriate time periods for each level of corrective action.
 - (3) **Referral and Coordination with Water Board** – Each Permittee shall enforce its stormwater ordinances as necessary to achieve compliance at sites with observed violations. For cases in which Permittee enforcement tools are inadequate to remedy the noncompliance, the Permittee shall refer the case to the Water Board, district attorney or other relevant agencies for additional enforcement.
 - (4) **Recordkeeping** – Permittees shall maintain adequate records to demonstrate compliance and appropriate follow-up enforcement responses for facilities inspected.
Permittees shall maintain an electronic database or equivalent tabular system that contains the following information regarding industrial commercial site inspections:
 - (a) Name of Facility/Site Inspected
 - (b) Inspection Date
 - (c) Industrial General Permit coverage required (Yes or No)
 - (d) Compliance Status
 - (e) Type of Enforcement (if applicable)
 - (f) Type of Activity or Pollutant Source

Examples: Outdoor process/manufacturing areas, Outdoor material storage areas, Outdoor waste storage/disposal areas, outdoor vehicle and equipment storage/maintenance areas, Outdoor parking areas and access roads, Outdoor wash areas, Rooftop equipment, Outdoor drainage from indoor areas

- (g) Specific Problems
- (h) Problem Resolution
- (i) Additional Comments

The electronic database or equivalent tabular system shall be made readily available to the Executive Officer and during inspections and audits by the Water Board staff or its representatives.

- (5) The ERP shall be developed and implemented by April 1, 2010.

iii. Reporting – Permittees shall include the following information in each Annual Report:

- (1) Number of inspections conducted, Number of violations issued (excluding verbal warnings), Percentage of sites inspected in violation, and number and percent of violations resolved within 10 working days or otherwise deemed resolved in a longer but still timely manner;
- (2) Frequency and Types/categories of violations observed, Frequency and type of enforcement conducted;
- (3) Summary of types of violations noted by business category; and
- (4) Facilities that are required to have coverage under the Industrial General Permit, but have not filed for coverage.

C.4.d. Staff Training

i. Task Description

Permittees shall provide focused training for inspectors annually. Trainings may be Program-wide, Region-wide, or Permittee-specific.

ii. Implementation Level

At a minimum, train inspectors, within the 5-year term of this Permit, in the following topics:

- (1) Urban runoff pollution prevention;
- (2) Inspection procedures;
- (3) Illicit Discharge Detection, Elimination and follow-up; and
- (4) Implementation of typical BMPs at Industrial and Commercial Facilities.

Permittees, either countywide or regionally, if they have not already done so, are encouraged to create or adopt guidance for inspectors or reference existing inspector guidance including the California Association of Stormwater Quality Agencies (CASQA) Industrial BMP Handbook.

iii. Reporting

The Permittees shall include the following information in the Annual Report:

- (1) Dates of trainings;
- (2) Training topics that have been covered; and
- (3) Percentage of Permittee inspectors attending training.

C.5. Illicit Discharge Detection and Elimination

The purpose of this provision is to implement the illicit discharge prohibition and to ensure illicit discharges are detected and controlled that are not otherwise controlled under provision C4, Industrial and Commercial Site Controls and C6, Construction Site Controls. Permittees shall develop and implement an illicit discharge program that includes an active surveillance component and a centralized complaint collection and follow-up component to target illicit discharge and non-stormwater sources. Permittees shall maintain a complaint tracking and follow-up data system as their primary accountability reporting for this provision.

C.5.a. Legal Authority

- i.** Task Description – Permittees shall have the legal authority to prohibit and control illicit discharges and escalate stricter enforcement to achieve expedient compliance.
- ii. Implementation Level**
 - (1) Permittees shall have adequate legal authority to address stormwater and non-stormwater pollution associated with, but not limited to the following:
 - (a) Sewage;
 - (b) Discharges of wash water resulting from the cleaning of exterior surfaces and pavement, or the equipment and other facilities of any commercial business, or any other public or private facility;
 - (c) Discharges of runoff from material storage areas, including containing chemicals, fuels, or other potentially polluting or hazardous materials;
 - (d) Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
 - (e) Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and
 - (f) Discharges of food-related wastes (e.g., grease, fish processing, and restaurant kitchen mat and trash bin wash water, etc.).
 - (2) Permittees shall have adequate legal authority to prohibit, discover through inspection and surveillance, and eliminate illicit connections and discharges to storm drains.
 - (3) Permittees shall have adequate legal authority to control the discharge of spills, dumping, or disposal of materials other than storm water to storm drains.

C.5.b. Enforcement Response Plan (ERP)

- i.** Task Description – Permittees shall develop and implement an ERP that will serve as guidance for inspection staff to take consistent actions to achieve timely and effective abatement of illicit discharges.
- ii.** Implementation Level – The ERP shall contain the following:

- (1) Recommended responses and enforcement actions – including timeframes for corrections of problems – for various types and degree of violations. The ERP shall provide guidelines on when to employ the range of regulatory responses from warnings, citations and cleanup and cost recovery, to administrative or criminal penalties.
- (2) Timely Correction of Violations: All violations must be corrected in a timely manner with the goal of correcting them before the next rain event but no longer than 10 business days after the violations are discovered. If more than 10 business days are required for compliance, a rationale shall be recorded in the electronic database or equivalent tabular system. Immediate correction can be temporary and short-term if a long-term, permanent correction will involve significant resources and construction time. An example would be replumbing of a wash area to the sanitary sewer, which would involve an immediate short-term, temporary fix followed by permanent replumbing.
- (3) If corrective actions are not implemented promptly or if there are repeat violations, Permittees shall escalate responses as needed to achieve compliance, including referral to other agencies were necessary.
- (4) The ERP shall be developed and implemented by April 1, 2010.

C.5.c. Spill and Dumping Response, Complaint Response, and Frequency of Inspections

- i. Task Description – Permittees shall have a central contact point, including a phone number for complaints and spill reporting, and publicize this number to both internal Permittee staff and the public. If 911 is selected, also maintain and publicize a staffed, non-emergency phone number with voicemail, which is checked during normal business hours.

Permittees shall develop a spill/dumping response flow chart and phone tree or contact list for internal use that shows the various responsible agencies and their contacts, who would be involved in illicit discharge incident response that goes beyond the Permittees immediate capabilities. The list shall be maintained and updated as changes occur.

Permittees shall conduct reactive inspections in response to complaints and follow-up inspections as needed to ensure that corrective measures have been implemented to achieve and maintain compliance.

- ii. Implementation Level – Permittees will have the phone number and contact information available and integrated into training and outreach both to Permittee staff and the public by July 1, 2010.
- iii. Reporting – Submit the complaint and spill response phone number and spill contact list with the 2010 Annual Report and update annually if changes occur.

C.5.d. Control of Mobile Sources

- i.** Task Description – The purpose of this section is to establish oversight and control of pollutants associated with mobile business sources.
- ii.** Implementation Level – Each Permittee shall develop and implement a program to reduce the discharge of pollutants from mobile businesses.
 - (1) The program shall include the following:
 - (a) Development and implementation of minimum standards and BMPs to be required for each of the various types of mobile businesses such as automobile washing, power washing, steam cleaning, and carpet cleaning. This guidance can be developed via county-wide or regional collaboration.
 - (b) Development and implementation of an enforcement strategy which specifically addresses the unique characteristics of mobile businesses.
 - (c) Outreach to mobile businesses operating within the Permittee’s jurisdiction with minimum standards and BMP requirements and local ordinances through an outreach and education strategy.
 - (d) Inspection of mobile businesses as needed.
 - (2) Permittees should cooperate regionally in developing and implementing their programs for mobile businesses, including sharing of mobile business inventories, BMP requirements, enforcement action information, and education.
- iii.** Reporting – Permittees shall report on implementation of minimum standards and BMPs for mobile business and their enforcement strategy in each Annual Report.

C.5.e. Collection System Screening - Municipal Separate Storm Sewer System (MS4) Map Availability

- i.** Task Description – Permittees shall perform routine surveys for illicit discharges and illegal dumping in above ground check points in the collection system including elements that are typically inspected for other maintenance purposes, such as end of pipes, creeks, flood conveyances, storm drain inlets and catch basins, in coordination with public works/flood control maintenance surveys, video inspections of storm drains, and during other routine Permittee maintenance and inspection activities when Permittee staff are working in or near the MS4 system.
- ii.** Implementation Level – Permittees shall develop and implement a screening program utilizing the USEPA/Center for Watershed Protection publication, “Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessment.” Permittees shall implement the screening program by conducting a survey of strategic collection system check points (one screening point per square mile of Permittee urban and suburban jurisdiction area, less open space) including some key major outfalls draining industrial areas as defined in 40 CFR 122.26 (b)(5) once each year in dry

weather conditions meaning no significant rainfall within the past 3 weeks. Routine surveys that occur on an ongoing basis during regular conveyance system inspections may be credited toward this requirement. Make maps of the MS4 publicly available, either electronically or in hard copy by July 1, 2010. The public availability shall be through a publicized single point of contact that is convenient for the public, such as a staffed counter or web accessible maps. The MS4 map availability shall be publicized through Permittee directories and web pages.

- iii. Reporting – Permittees shall provide a summary of their collection screening program, a summary of problems found during collection system screening, and any changes to the screening program in each Annual Report.

C.5.f. Tracking and Case Follow-up

- i. Task Description – All incidents or discharges reported to the complaint/spill system that might pose a threat to water quality shall be logged to track follow-up and response through problem resolution. The data collected shall be sufficient to demonstrate escalating responses for repeated problems, and inter/intra-agency coordination, where appropriate.
- ii. Implementation Level – Create and maintain a water quality spill and discharge complaint tracking and follow-up in an electronic database or equivalent tabular system by April 1, 2010.

The spill and discharge complaint tracking system shall contain the following information:

- (1) Complaint information:
 - (a) Date and time of complaint
 - (b) Type of pollutant
 - (c) Problem Status (potential or actual discharge.)
- (2) Investigation information:
 - (a) Date and time started
 - (b) Type of pollutant
 - (c) Entered storm drain and/or receiving water
 - (d) Date abated
 - (e) Type of enforcement (if applicable)
- (3) Response time (days)
 - (a) Call to investigation
 - (b) Investigation to abatement
 - (c) Call to abatement

The electronic database or equivalent tabular system shall be made available to Water Board staff as needed for review of enforcement response through problem resolution.

- iii.** Reporting – Permittees shall provide the following information in the Annual Report:
- (1) Number of discharges reported;
 - (2) Number of discharges reaching storm drains and/or receiving waters;
 - (3) Number and percentage of discharges resolved in a timely manner; and
 - (4) Summary of major types of discharges and complaints.

C.6. Construction Site Control

Each Permittee shall implement a construction site inspection and control program at all construction sites, with follow-up and enforcement consistent with each Permittee's respective Enforcement Response Plan (ERP), to prevent construction site discharges of pollutants and impacts on beneficial uses of receiving waters. Inspections shall confirm implementation of appropriate and effective erosion and other construction pollutant controls by construction site operators/developers; and reporting shall demonstrate the effectiveness of this inspection and problem solution activity by the Permittees.

C.6.a. Legal Authority for Effective Site Management

- i.** Task Description – Permittees shall have the ability to require effective stormwater pollutant controls, and escalate progressively stricter enforcement to achieve expedient compliance and clean up at all public and private construction sites.
- ii. Implementation Level**
 - (1) Permittees shall have the legal authority to require at all construction sites year round effective erosion control, run-on and runoff control, sediment control, active treatment systems (as appropriate), good site management, and non storm water management through all phases of construction (including but not limited to site grading, building, and finishing of lots) until the site is fully stabilized by landscaping or the installation of permanent erosion control measures.
 - (2) Permittees shall have the legal authority to oversee, inspect, and require expedient compliance and clean up at all construction sites year round.
- iii.** Reporting – Permittees shall certify adequacy of their respective legal authority in the 2010 Annual Report.

C.6.b. Enforcement Response Plan (ERP)

- i.** Task Description – Permittees shall develop and implement an ERP that will serve as a reference document for inspection staff to take consistent actions to achieve timely and effective compliance from all public and private construction site owners/operators.
- ii. Implementation Level**
 - (1) The ERP shall include required enforcement actions – including timeframes for corrections of problems – for various field violation scenarios. All violations must be corrected in a timely manner with the goal of correcting them before the next rain event but no longer than 10 business days after the violations are discovered. If more than 10 business days are required for compliance, a rationale shall be recorded in the electronic database or equivalent tabular system.

- (2) If site owners/operators do not implement appropriate corrective actions in a timely manner, or if violations repeat, Permittees shall take progressively stricter responses to achieve compliance. The ERP shall include the structure for progressively stricter responses and various violation scenarios that evoke progressively stricter responses.
- (3) The ERP shall be developed and implemented by April 1, 2010.

C.6.c. Best Management Practices Categories

- i. Task Description – Permittees shall require all construction sites to have site specific, and seasonally- and phase-appropriate, effective Best Management Practices (BMPs) in the following six categories:
 - Erosion Control
 - Run-on and Run-off Control
 - Sediment Control
 - Active Treatment Systems (as necessary)
 - Good Site Management
 - Non Stormwater Management.

These BMP categories are listed in State General NPDES Permit for Stormwater Discharges Associated with Construction Activities (hereinafter the Construction General Permit).

ii. Implementation Level

The BMPs targeting specific pollutants within the six categories listed in C.6.c.i. shall be site specific. Site specific BMPs targeting specific pollutants from the six categories listed in C.6.c.i. can be a combination of BMPs from:

- California BMP Handbook, Construction, January 2003.
- Caltrans Stormwater Quality Handbooks, Construction Site Best Management Practices Manual, March 2003, and addenda.
- California Regional Water Quality Control Board, San Francisco Bay Region, Erosion and Sediment Control Field Manual, 2002.
- New BMPs available since the release of these Handbooks.

C.6.d. Plan Approval Process

- i. Task Description – Permittees shall review erosion control plans for consistency with local requirements, appropriateness and adequacy of proposed BMPs for each site before issuance of grading permits for projects. Permittees shall also verify that sites disturbing one acre or more of land have filed a Notice of Intent for coverage under the Construction General Permit.
- ii. Implementation Level – Before approval and issuance of local grading permits, each Permittee shall perform the following:

- (1) Review the site operator's/developer's erosion/pollution control plan or Stormwater Pollution Prevention Plan (SWPPP) to verify compliance with the Permittee's grading ordinance and other local requirements. Also review the site operator's/developer's erosion/pollution control plan or SWPPP to verify that seasonally appropriate and effective BMPs for the six categories listed in C.6.c.i. are planned;
- (2) For sites disturbing one acre or more of soil, verify that the site operators/developers have filed a Notice of Intent for permit coverage under the Construction General Permit; and
- (3) Provide construction stormwater management educational materials to site operators/developers, as appropriate.

C.6.e. Inspections

i. Task Description – Permittees shall conduct inspections to determine compliance with local ordinances (grading and stormwater) and determine the effectiveness of the BMPs in the six categories listed in C.6.c.i.; and Permittees shall require timely corrections of all actual and threatened violations of local ordinances observed.

ii. Implementation Level

(1) **Wet Season Notification**

By September 1st of each year, each Permittee shall remind all site developers and/or owners disturbing one acre or more of soil to prepare for the upcoming wet season.

(2) **Frequency of Inspections**

Inspections shall be conducted monthly during the wet season¹¹ at the following sites:

- (a) All construction sites disturbing one or more acre of land; and
- (b) **High Priority Sites** – Other sites determined by the Permittee or the Water Board as significant threats to water quality. In evaluating threat to water quality, the following factors shall be considered:
 - (i) Soil erosion potential or soil type;
 - (ii) Site slope;
 - (iii) Project size and type;
 - (iv) Sensitivity or receiving waterbodies;
 - (v) Proximity to receiving waterbodies;
 - (vi) Non-stormwater discharges; and
 - (vii) Any other relevant factors as determined by the local agency or the Water Board.

¹¹ For the purpose of inspections, the wet season is defined as October through April, but sites need to implement seasonally appropriate BMPs in the six categories listed in C.6.c.i throughout the year.

(3) **Contents of Inspections**

Inspections shall focus on the adequacy and effectiveness of the site specific BMPs implemented for the six categories listed in C.6.c.i. Permittees shall require timely corrections of all actual and potential problems observed. Inspections of construction sites shall include, but are not limited to, the following:

- (a) Assessment of compliance with Permittee's ordinances and permits related to urban runoff, including the implementation and maintenance of the verified erosion/pollution control plan or SWPPP (from C.6.d.ii.(1));
- (b) Assessment of the adequacy and effectiveness of the site specific BMPs implemented for the six categories listed in C.6.c.i.;
- (c) Visual observations for:
 - actual discharges of sediment and/or construction related materials into stormdrains and/or waterbodies.
 - evidence of sediment and/or construction related materials discharges into stormdrains and/or waterbodies.
 - illicit connections.
 - potential illicit connections.
- (d) Education on stormwater pollution prevention, as needed.

(4) **Tracking**

All inspections must be recorded on a written or electronic inspection form. Inspectors shall follow the ERP if a violation is noted and shall require timely corrections of all actual and threatened violations of local ordinances observed. All violations must be corrected in a timely manner with the goal of correcting them before the next rain event but no longer than 10 business days after the violations are discovered. If more than 10 business days are required for compliance, a rationale shall be recorded on the inspection form.

Permittees shall track in an electronic database or tabular format all inspections. This electronic database or tabular format shall be made readily available to the Executive Officer and during inspections and audits by the Water Board staff or its representatives. This electronic database or tabular format shall record the following information for each site inspection:

- (a) Site name;
- (b) Inspection date;
- (c) Weather during inspection;
- (d) Has there been rainfall with runoff since the last inspection?;
- (e) Enforcement Response Level (Use ERP);
- (f) Problem(s) observed using Illicit Discharge and the six BMP categories listed in C.6.c.i.;

- (g) Specific Problem(s) (List the specific problem(s) within the BMP categories);
- (h) Resolution of Problems noted using the following three standardized categories: Problems Fixed, Need More Time, and Escalate Enforcement; and
- (i) Comments, which shall include all Rationales for Longer Compliance Time, all escalation in enforcement discussions, and any other information that may be relevant to that site inspection.

iii. Reporting

- (1) In each Annual Report, each Permittee shall summarize the following information:
 - (a) Total number of active sites disturbing less than one acre of soil requiring inspection;
 - (b) Total number of active sites disturbing 1 acre or more of soil;
 - (c) Total number of inspections conducted;
 - (d) Number and percentage¹² of violations in each of the six categories listed in C.6.c.i.;
 - (e) Number and percentage¹³ of each type of enforcement action taken as listed in each Permittee's ERP;
 - (f) Number of discharges, actual and those inferred through evidence, of sediment or other construction related materials;
 - (g) Number of sites with discharges, actual and those inferred through evidence, of sediment or other construction related materials;
 - (h) Number and percentage¹⁴ of violations fully corrected prior to the next rain event but no longer than 10 business days after the violations are discovered or otherwise considered corrected in a timely, though longer period; and
 - (i) Number and percentage¹⁵ of violations not fully corrected 30 days after the violations are discovered.
- (2) In each Annual Report, each Permittee shall evaluate its respective electronic database or tabular format and the summaries produced in C.6.e.ii.(4) above. This evaluation shall include findings on the program's strength, comparison to previous years' results, as well as areas that need

¹² Percentage shall be calculated as number of violations in each category divided by total number of violations in all six categories.

¹³ Percentage shall be calculated as number of each type of enforcement action divided by the total number of enforcement actions.

¹⁴ Percentage shall be calculated as follows: number of violations fully corrected prior to the goal of the next rain event but no later than 10 business days after the violations are discovered divided by the total number of violations for the reporting year.

¹⁵ Percentage shall be calculated as follows: number of violations not fully corrected 30 days after the violations are discovered divided by the total number of violations for the reporting year.

more focused education for site owners, operators, and developers the following year.

- (3) The Executive Officer may require that the information recorded and tracked by C.6.e.ii.(4) be submitted electronically or in a tabular format. Permittees shall submit the information within 10-working days of the Executive Officer's requirement. Submittal of the information in tabular form for the reporting year is not required in each Annual Report but encouraged.

C.6.f. Staff Training

- i. Task Description – Permittees shall provide training or access to training for staff conducting construction stormwater inspections.
- ii. Implementation Level – Permittees shall provide training at least every other year to municipal staff responsible for conducting construction site stormwater inspections. Training topics will include information on correct uses of specific BMPs, proper installation and maintenance of BMPs, Permit requirements, local requirements, and ERP.
- iii. Reporting – Permittees shall include in each Annual Report the following information: training topics covered, dates of training, and the percentage of Permittees' inspectors attending each training. If no training in that year, so state.

C.7. Public Information and Outreach

Each Permittee shall increase the knowledge of the target audiences regarding the impacts of stormwater pollution on receiving water and potential solutions to mitigate the problems caused; change the waste disposal and runoff pollution generation behavior of target audiences by encouraging implementation of appropriate solutions; and involve various citizens in mitigating the impacts of stormwater pollution.

C.7.a. Storm Drain Inlet Marking

- i. Task Description** – Permittees shall mark and maintain at least 80 percent of municipally-maintained storm drain inlets with an appropriate stormwater pollution prevention message, such as “No dumping, drains to Bay” or equivalent. At least 80% of municipally-maintained storm drain inlet markings shall be inspected and maintained at least once per 5-year permit term. For newly approved, privately maintained streets, Permittees shall require inlet marking by the project developer upon construction and maintenance of markings through the development maintenance entity. Markings shall be verified prior to acceptance of the project.
- ii. Implementation Level**
 - (1) Inspect and maintain markings of at least 80 percent of municipality maintained inlets to ensure they are legibly labeled with a no dumping message or equivalent once per permit term.
 - (2) Verify that newly developed streets are marked prior to acceptance of the project.
- iii. Reporting**
 - (1) In the 2013 Annual Report, each Permittee shall report prior years’ annual percentages of municipality maintained inlet markings inspected and maintained as legible with a no dumping message or equivalent.
 - (2) In the 2013 Annual Report, each Permittee shall report prior years’ annual number of projects accepted after inlet markings were verified.

C.7.b. Advertising Campaigns

- i. Task Description** – Permittees shall participate in or contribute to advertising campaigns on trash/litter in waterways and pesticides with the goal of significantly increasing overall awareness of stormwater runoff pollution prevention messages and behavior changes in target audience.
- ii. Implementation Level**
 - (1) Target a broad audience with two separate advertising campaigns, one focused on reducing trash/litter in waterways and one focused on reducing the impact of urban pesticides. The advertising campaigns may be coordinated regionally or county-wide.

- (2) Permittees shall conduct a pre-campaign survey and a post-campaign survey to identify and quantify the audiences' knowledge, trends, and attitudes and/or practices; and to measure the overall population's awareness of the messages and behavior changes achieved by the two advertising campaigns. These surveys may be done regionally or county-wide.

iii. Reporting

- (1) In the Annual Report following the pre-campaign survey, each Permittee (or the Countywide Program, if the survey was done county-wide or regionally) shall provide a report of the survey completed, which at a minimum, shall include the following:
 - A summary of how the survey was implemented.
 - A copy of the survey.
 - A copy of the survey results.
 - An analysis of the survey results.
 - A discussion of the outreach strategies based on the survey results.
 - A discussion of the planned or future advertising campaigns to influence awareness and behavior changes regarding trash/litter and pesticides.
- (2) In the Annual Report following the post campaign survey, each Permittee (or the Countywide Program, if survey was done county-wide or regionally) shall provide a report of the survey completed, which at minimum shall include the information required in the pre-campaign report (C.7.b.iii.(1)) and the following:
 - A discussion of the campaigns.
 - A discussion of the measurable changes in awareness and behavior achieved.
 - An update of outreach strategies based on the survey results.

C.7.c. Media Relations – Use of Free Media

- i.** Task Description – Permittees shall participate in or contribute to a media relations campaign. Maximize use of free media/media coverage with the objective of significantly increasing the overall awareness of stormwater pollution prevention messages and associated behavior change in target audiences, and to achieve public goals.
- ii.** Implementation Level – Conduct a minimum of six pitches (e.g., press releases, public service announcements, and/or other means) per year at the county-wide program, regional, and/or local levels.
- iii.** Reporting – In each Annual Report, each Permittee (or the Countywide Program, if the media relations campaign was done county-wide or regionally) shall include the details of each media pitch, such as the medium, date, and content of the pitch.

C.7.d. Stormwater Point of Contact

- i. Task Description – Permittees shall individually or collectively create and maintain a point of contact, e.g., phone number or website, to provide the public with information on watershed characteristics and stormwater pollution prevention alternatives.
- ii. Implementation Level – Maintain and publicize one point of contact for information on stormwater issues. Permittees may combine this function with the complaint/spill contact required in C.5.
- iii. Reporting – In the 2010 Annual Report, each Permittee shall discuss how this point of contact is publicized and maintained. If any change occurs in this contact, report in subsequent annual report.

C.7.e. Public Outreach Events

- i. Task Description – Participate in and/or host events such as fairs, shows, workshops, (e.g., community events, street fairs, and farmers’ markets), to reach a broad spectrum of the community with both general and specific stormwater runoff pollution prevention messages. Pollution prevention messages shall include encouraging residents to (1) wash cars at commercial car washing facilities, (2) use minimal detergent when washing cars, and (3) divert the car washing runoff to landscaped area.
- ii. Implementation Level – Each Permittee shall annually participate and/or host the number of events according to its population, as shown in the table below:

Table 7.1 Public Outreach Events¹⁶

Permittee Population	Number of Outreach Events
< 10,000	2
10,001– 40,000	3
40,001 – 100,000	4
100,001 – 175,000	5
175,001 – 250,000	6
> 250,000	8
Non-population-based Permittees ¹⁷	6

Should a public outreach event contain significant citizen involvement elements, the Permittee may claim credit for both Public Outreach Events (C.7.e.) and Citizen Involvement Events (C.7.g.).

¹⁶ Permittees may claim individual credits for all events in which their Countywide Program or BASMAA participates, supports, and/or hosts, which are publicized to reach the Permittees jurisdiction.

¹⁷ Alameda County Flood Control and Water Conservation District, Contra Costa Flood Control and Water Conservation District, Santa Clara Valley Water District, Vallejo Sanitation and Flood Control District, and Zone 7 of the Alameda County Flood Control and Water Conservation District

- iii. Reporting – In each Annual Report, each Permittee shall list the events (name of event, event location, and event date) participated in and assess the effectiveness of efforts with appropriate measures (e.g., success at reaching a broad spectrum of the community, number of participants compared to previous years, post-event survey results, quantity/volume materials cleaned up and comparisons to previous efforts).

C.7.f. Watershed Stewardship Collaborative Efforts

- i. Task Description – Permittees shall individually or collectively encourage and support watershed stewardship collaborative efforts of community groups such as the Contra Costa Watershed Forum, the Santa Clara Basin Watershed Management Initiative, “friends of creek” groups, and other organizations that benefit the health of the watershed such as the Bay-Friendly Landscaping and Gardening Coalition. If no such organizations exist, encourage and support development of grassroots watershed groups or engagement of an existing group, such as a neighborhood association, in watershed stewardship activities. Coordinate with existing groups to further stewardship efforts.
- ii. Implementation Level – Annually demonstrate effort.
- iii. Reporting – In each Annual Report, each Permittee shall state the level of effort, describe the support given, state what efforts were undertaken and the results of these efforts, and provide an evaluation of the effectiveness of these efforts.

C.7.g. Citizen Involvement Events

- i. Task Description – Permittees shall individually or collectively, support citizen involvement events, which provide the opportunity for citizens to directly participate in water quality and aquatic habitat improvement, such as creek/shore clean-ups, adopt-an-inlet/creek/beach programs, volunteer monitoring, service learning activities such as storm drain inlet marking, community riparian restoration activities, community grants, other participation and/or host volunteer activities.
- ii. Implementation Level – Each Permittee shall annually sponsor and/or host the number of citizen involvement events according to its population, as shown in the table below:

Table 7.2 Community Involvement Events¹⁸

Permittee Population	Number of Involvement Events
< 10,000	1
10,001 – 40,000	1
40,001 – 100,000	2
100,001 – 175,000	3
175,001 – 250,000	4

¹⁸ Permittees can claim individual credit for all events sponsored or hosted by their Countywide Program or BASMAA, which are publicized to reach the Permittee’s jurisdiction.

Permittee Population	Number of Involvement Events
> 250,000	5
Non-population-based Permittees	2

Should a citizen involvement event contain significant public outreach elements, the Permittee may claim credit for both Citizen Involvement Events (C.7.g.) and Public Outreach Events (C.7.e.).

- iii. Reporting – In each Annual Report, each Permittee shall list the events (name of event, event location, and event date) participated in and assess the effectiveness of efforts with appropriate measures (e.g., success at reaching a broad spectrum of the community, number of participants compared to previous years, post-event survey results, number of inlets/creeks/shores/parks/and such adopted, quantity/volume materials cleaned up, data trends, and comparisons to previous efforts).

C.7.h. School-Age Children Outreach

- i. Task Description – Permittees shall individually or collectively implement outreach activities designed to increase awareness of stormwater and/or watershed message(s) in school-age children (K through 12).
- ii. Implementation Level – Implement annually and demonstrate effectiveness of efforts through assessment.
- iii. Reporting – In each Annual Report, each Permittee shall state the level of effort, spectrum of children reached, and methods used, and provide an evaluation of the effectiveness of these efforts.

C.7.i. Outreach to Municipal Officials

- i. Task Description – Permittees shall conduct outreach to municipal officials. One alternative means of accomplishing this is through the use of the Nonpoint Education for Municipal Officials program (NEMO) to significantly increase overall awareness of stormwater and/or watershed message(s) among regional municipal officials.
- ii. Implementation Level – At least once per permit cycle, or more often.
- iii. Reporting – Permittees shall summarize efforts in the 2013 Annual Report.

C.8. Water Quality Monitoring

C.8.a. Compliance Options

- i. **Regional Collaboration** – All Permittees shall comply with the monitoring requirements in C.8, however, Permittees may choose to comply with any requirement of this Provision through a collaborative effort to conduct or cause to be conducted the required monitoring in their jurisdictions. Where all or a majority of the Permittees collaborate to conduct water quality monitoring, this shall be considered a regional monitoring collaborative.

Where an existing collaborative body has initiated plans, before the adoption of this Permit, to conduct monitoring that would fulfill a requirement(s) of this Provision, but the monitoring would not meet this Provision's due date(s) by a year or less, the Permittees may request the Executive Officer adjust the due date(s) to synchronize with such efforts.

The types, quantities, and quality of data required within Provision C.8 establish the minimum level-of-effort that a regional monitoring collaborative must achieve. Provided these data types, quantities, and quality are obtained, a regional monitoring collaborative may develop its own sampling design. For Pollutants of Concern and Long-Term monitoring required under C.8.e, an alternative approach may be pursued by Permittees provided that: either similar data types, data quality, data quantity are collected with an equivalent level of effort described under C.8.e; or an equivalent level of monitoring effort is employed to answer the management information needs stated under C.8.e.

- ii. **Implementation Schedule** – Monitoring conducted through a regional monitoring collaborative shall commence data collection by October 2011. All other Permittee monitoring efforts shall commence data collection by October 2010. By July 1, 2010, each Permittee shall provide documentation to the Water Board, such as a written agreement, letter, or similar document that confirms whether the Permittee will conduct monitoring individually or through a regional monitoring collaborative.¹⁹
- iii. **Permittee Responsibilities** – A Permittee may comply with the requirements in Provision C.8 by performing the following:
 - (1) Contributing to its stormwater countywide program, as determined appropriate by the Permittee members, so that the stormwater countywide Program conducts monitoring on behalf of its members;
 - (2) Contributing to a regional collaborative effort;

¹⁹ This documentation will allow the Water Board to know when monitoring will commence for each Permittee. Permittees who commit to monitoring individually may join the regional monitoring collaborative at any time. Any Permittee who discontinues monitoring through the regional collaborative must commence complying with all requirements of Provision C.8 immediately.

- (3) Fulfilling monitoring requirements within its own jurisdictional boundaries; or
- (4) A combination of the previous options, so that all requirements are fulfilled.

iv. Third-party Monitoring – Permittees may choose to fulfill requirements of Provision C.8 using data collected by citizen monitors or other third-party organizations, provided the data are demonstrated to meet the data quality objectives described in Provision C.8.h. Where an existing third-party organization has initiated plans to conduct monitoring that would fulfill a requirement(s) of this Provision, but the monitoring would not meet this Provision's due date(s) by a year or less, the Permittees may request that the Executive Officer adjust the due date(s) to synchronize with such efforts.

C.8.b. San Francisco Estuary Receiving Water Monitoring

With limited exceptions, urban runoff from the Permittees' jurisdictions ultimately discharges to the San Francisco Estuary. Monitoring of the Estuary is intended to answer questions²⁰ such as:

- Are chemical concentrations in the Estuary potentially at levels of concern and are associated impacts likely?
- What are the concentrations and masses of contaminants in the Estuary and its segments?
- What are the sources, pathways, loadings, and processes leading to contaminant related impacts in the Estuary?
- Have the concentrations, masses, and associated impacts of contaminants in the Estuary increased or decreased?
- What are the projected concentrations, masses, and associated impacts of contaminants in the Estuary?

Permittees shall participate in implementing an Estuary receiving water monitoring program, at a minimum equivalent to the San Francisco Estuary Regional Monitoring Program for Trace Substances (RMP), by contributing their fair-share financially on an annual basis.

C.8.c. Status Monitoring/Rotating Watersheds

- i.** Status Monitoring is intended to answer these questions: Are water quality objectives, both numeric and narrative, being met in local receiving waters,

²⁰ These are the management questions approved by the Regional Monitoring Program's Steering Committee on May 9, 2008, and stated at http://www.sfei/rmp/rmp_steering_meetings/rmp_steering_meeting_5_09_08/Item%2010a%20Attachment%201%20%20Draft%20RMP%20Management%20Questions%2005-02-08%20Annotated.pdf. While the stated objectives may change over time, the intent of this provision is for Permittees to continue contributing financially and as stakeholders in such a program as the RMP, which monitors the quality of San Francisco Bay.

including creeks, rivers and tributaries? Are conditions in local receiving waters supportive of or likely to be supportive of beneficial uses?

- ii. Parameters and Methods** – Permittees shall conduct Status Monitoring using the parameters, methods, occurrences, durations, and minimum number of sampling sites as described in Table 8.1. Spring sampling shall be conducted during the April - June timeframe; dry weather sampling shall be conducted during the July - September timeframe. Minor variations of the parameters and methods may be allowed with Executive Officer concurrence.
- iii. Frequency** – Permittees shall complete the Status Monitoring in Table 8.1 at the following frequencies:
 - Alameda Permittees – annually
 - Contra Costa Permittees – annually
 - Fairfield-Suisun Permittees – twice during the Permit term
 - San Mateo Permittees – annually
 - Santa Clara Permittees – annually
 - Vallejo Permittees – once during the Permit term

Table 8.1 Status Monitoring Elements

Status Monitoring Parameter	Sampling and/or Analytical Method ²¹	Minimum Sampling Occurrence ²²	Duration of Sampling	Minimum # Sample Sites to Monitor/Yr ²³ Santa Clara & Alameda Permittees/ Contra Costa & San Mateo Permittees/ Fairfield-Suisun & Vallejo Permittees	Result(s) that Trigger a Monitoring Project in Provision C.8.d.i.
Biological Assessment ²⁴ (Includes Physical Habitat Assessment and General Water Quality Parameters ²⁵) Nutrients (total phosphorus, dissolved orthophosphate, total nitrogen, nitrate, ammonia, silica, chloride,	SWAMP Std Operating Procedure ^{26,27,28} for Biological Assessments & PHab; SWAMP comparable	1/yr (Spring Sampling)	Grab sample	Spring 20 / 10 / 4	BMI metrics that indicate substantially degraded community as per Attachment H, Table H-1 For Nutrients: 20% of results in one waterbody exceed one or more water quality standard

²¹ Refers to field protocol, instrumentation and/or laboratory protocol.

²² Refers to the number of sampling events at a specific site in a given year.

²³ The number of sampling sites shown is based on the relative population in each Regional Stormwater Countywide Program and is listed in this order: Santa Clara & Alameda Countywide / Contra Costa & San Mateo Countywide / Vallejo & Fairfield-Suisun Programs.

²⁴ The same general location must be used to collect benthic community, sediment chemistry, and sediment toxicity samples. General Water Quality Parameters need not be collected twice, where it is collected by a multi-parameter probe at a subset of these sample sites (see next row of Table 8.1).

²⁵ Includes dissolved oxygen, temperature, conductivity, and pH.

²⁶ Ode, P.R. 2007. Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California, California State Water Resources Control Board Surface Water Ambient Monitoring Program (SWAMP), as subsequently revised (http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/phab_sopr6.pdf). Permittees may coordinate with Water Board staff to modify their sampling procedures if these referenced procedures change during the Permit term.

²⁷ Biological assessments shall include benthic macroinvertebrates and algae. Bioassessment sampling method shall be multihabitat reach-wide. Macroinvertebrates shall be identified according to the Standard Taxonomic Effort Level I of the Southwestern Association of Freshwater Invertebrate Taxonomists, using the most current SWAMP approved method. Current methods are documented in (1) SWAMP Standard Operating Procedure (SOP) and Interim Guidance on Quality Assurance for SWAMP Bioassessments, Memorandum to SWAMP Roundtable from Beverly H. van Buuren and Peter R. Ode, 5-21-07, and (2) Amendment to SWAMP Interim Guidance on Quality Assurance for SWAMP Bioassessments, Memorandum to SWAMP Roundtable from Beverly H. van Buuren and Peter R. Ode, 9-17-08. For algae, include mass (ash-free dry weight), chlorophyll a, diatom and soft algae taxonomy, and reachwide algal percent cover. Physical Habitat (PHab) Assessment shall include the SWAMP basic method plus 1) depth and pebble count + CPOM, 2) cobble embeddedness, 3) discharge measurements, and 4) in-stream habitat. Permittees may coordinate with Water Board staff to modify these sampling procedures if SWAMP procedures change during the Permit term.

²⁸ Algae shall be collected in a consistent timeframe as Regional SWAMP. For guidance on algae sampling and evaluation: Fetscher, A. and K. McLaughlin, May 16, 2008. Incorporating Bioassessment Using Freshwater Algae into California's Surface Water Ambient Monitoring Program (SWAMP). Technical Report 563 and current SWAMP-approved updates to Standard Operating Procedures therein. Available at http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/563_periphyton_bioassessment.pdf.

Status Monitoring Parameter	Sampling and/or Analytical Method ²¹	Minimum Sampling Occurrence ²²	Duration of Sampling	Minimum # Sample Sites to Monitor/Yr ²³ Santa Clara & Alameda Permittees/ Contra Costa & San Mateo Permittees/ Fairfield-Suisun & Vallejo Permittees	Result(s) that Trigger a Monitoring Project in Provision C.8.d.i.
dissolved organic carbon, suspended sediment concentration)	methods for Nutrients				or established threshold
General Water Quality ²⁹	Multi-Parameter Probe	2/yr (Concurrent with bioassessment & during the Aug. - Sept. timeframe)	15-minute intervals for 1-2 weeks	3 / 2 / 1	20% of results in one waterbody exceed one or more water quality standard or established threshold
Chlorine (Free and Total)	USEPA Std. Method 4500 Cl F ³⁰	2/yr Spring & Dry Seasons	Grab sample	Spring 20 / 10 / 2 Dry 3 / 2 / 1	After immediate resampling, concentrations remain > 0.08 mg/L
Temperature	Digital Temperature Logger	60-minute intervals	60-minute intervals April through Sept.	8 / 4 / 1	20% of results in one waterbody exceed applicable temperature threshold ³¹
Toxicity – Water Column ³²	Applicable SWAMP Comparable Method	2/yr (1/Dry Season & 1 Storm Event)	Grab or composite sample	3 / 2 / 1	If toxicity results < 50% of control results, repeat sample. If 2nd sample yields < 50% of control results, proceed to C.8.d.i.

²⁹ Includes dissolved oxygen, temperature, conductivity, and pH.

³⁰ The method of analysis shall achieve a method detection limit at least as low as that achieved by the Amperometric Titration Method (4500-Cl from *Standard Methods for Examination of Water and Wastewater*, Edition 20).

³¹ If temperatures exceed applicable threshold (e.g., Maximum Weekly Average Temperature, Sullivan K., Martin, D.J., Cardwell, R.D., Toll, J.E., Duke, S. 2000. *An Analysis of the Effects of Temperature on Salmonids of the Pacific Northwest with Implications for Selecting Temperature Criteria, Sustainable Ecosystem Institute*) or spike with no obvious natural explanation observed.

³² US EPA three species toxicity tests: *Selenastrum* growth and *Ceriodaphnia* and *Pimephales* with lethal and sublethal endpoints. Also *Hyaella azteca* with lethal endpoint.

Status Monitoring Parameter	Sampling and/or Analytical Method ²¹	Minimum Sampling Occurrence ²²	Duration of Sampling	Minimum # Sample Sites to Monitor/Yr ²³ Santa Clara & Alameda Permittees/ Contra Costa & San Mateo Permittees/ Fairfield-Suisun & Vallejo Permittees	Result(s) that Trigger a Monitoring Project in Provision C.8.d.i.
Toxicity– Bedded Sediment, Fine-grained ³³	Applicable SWAMP Comparable Method	1/yr	Grab sample	3 / 2 / 1 At fine-grained depositional area at bottom of watershed	See Attachment H, Table H-1
Pollutants – Bedded Sediment, ³⁴ fine- grained	Applicable SWAMP Comparable Method inc. grain size	1/yr	Grab sample	3 / 2 / 1 At fine-grained depositional area at bottom of watershed	See Attachment H, Table H-1
Pathogen Indicators ³⁵	U.S. EPA protocol ³⁶	1/yr (During Summer)	Follow U.S. EPA protocol	5 / 5 / * *Fairfield-Suisun & Vallejo Permittees: 3 sites twice in permit term	Exceedance of USEPA criteria
Stream Survey (stream walk & mapping) ³⁷	USA ³⁸ or equivalent	1 waterbody/yr	N/A	9 / 6 / 3 stream miles/year	N/A

³³ Bedded sediments should be fine-grain from depositional areas. Grain size and TOC must be reported. Coordinate with TMDL Provision requirements as applicable.

³⁴ Bedded sediments should be fine-grain from depositional areas. Grain size and TOC must be reported. Analytes shall include all of those reported in MacDonald et al. 2000 (including copper, nickel, mercury, PCBs, DDT, chlordane, dieldrin) as well as pyrethroids (see Table 8.4 for list of pyrethroids). Coordinate with TMDL Provision requirements as applicable. MacDonald, D.D., G.G. Ingersoll, and T.A. Berger. 2000. Development and Evaluation of Consensus-based Sediment Quality Guidelines for Freshwater Ecosystems. *Archives of Environ. Contamination and Toxicology* 39(1):20–31.

³⁵ Includes fecal coliform and *E. Coli*.

³⁶ Rather than collecting samples over five separate days, Permittees may use Example #2, pg. 54, of USEPA's *Implementation Guidance for Ambient Water Quality Criteria for Bacteria*, March 2004 Final.

³⁷ The Stream Surveys need not be repeated on a watershed if a Stream Survey was completed on that waterbody within the previous five years. The number of stream miles to be surveyed in any given year may be less than that shown in Table 8-1 in order to avoid repeating surveys at areas surveyed during the previous five years.

³⁸ Center for Watershed Protection, Manual 10: *Unified Stream Assessment: A User's Manual*, February 2005.

- iv. **Locations** – For each sampling year (per C.8.c.iii.), Permittees shall select at least one waterbody to sample from the applicable list below. Locations shall be selected so that sampling is sufficient to characterize segments of the waterbody(s). For example, Permittees required to collect a larger number of samples should sample two or more waterbodies, so that each sampling effort represents a reasonable segment length and/or type. Samples shall be collected in reaches that receive urban stormwater discharges, except in possible infrequent instances where non-urban-impacted stream samples are needed for comparison³⁹. Waterbody selection shall be based on factors such as watershed area, land use, likelihood of urban runoff impacts, and existing monitoring data.

Table 8.2 Status Monitoring Locations – Waterbodies

SCVURPPP	ACCWP	CCCWP	SMCWPPP	FSUMRP	VALLEJO
Coyote Creek and tributaries	Arroyo Valle (below Livermore or lower)	Kirker Creek	San Pedro Creek and tributaries	Laurel Creek	Chabot Creek
Guadalupe River and tributaries	Arroyo Mocho	Mt. Diablo Creek	Pilarcitos Creek	Ledgewood Creek	Austin Creek & tributaries
San Tomas Creek and tributaries	Tassajara Creek	Walnut Creek and tributaries	Colma Creek		
Calabazas Creek	Alamo Creek	Rodeo Creek	San Bruno Creek and tributaries		
Permanente Creek and tributaries	Arroyo de la Laguna	Pinole Creek	Millbrae Creek and tributaries		
Stevens Creek and tributaries	Alameda Creek (at Fremont or below)	San Pablo Creek	Mills Creek and tributaries		
Matadero Creek and tributaries	San Lorenzo Creek & tribs	Alhambra Creek	Easton Creek and tributaries		
Adobe Creek	San Leandro Creek & tribs	Wildcat Creek	Sanchez Creek and tributaries		
Lower Penitencia Creek and tributaries	Oakland, Berkeley, or Albany Creeks		Burlingame Creek and tributaries		
Barron Creek			San Mateo Creek (below dam only)		
San Francisquito Creek & tributaries			Borel Creek & tributaries		
			Laurel Creek & tribs		
			Belmont Creek & tribs		
			Pulgas Creek & tribs		
			Cordilleras & tributaries		
			Redwood Creek & tribs		
			Atherton Creek & tribs		
			San Francisquito Creek and tributaries		

³⁹ Sampling efforts shall focus on stream reaches with urban stormwater system discharges. Sampling upstream of urban outfalls is not precluded where needed to meet sampling plan objectives.

- v. Status Monitoring Results – When Status Monitoring produces results such as those described in the final column of Table 8.1, Permittees shall conduct Monitoring Project(s) as described in C.8.d.i.

C.8.d. Monitoring Projects – Permittees shall conduct the Monitoring Projects listed below.

- i. **Stressor/Source Identification** – When Status results trigger a follow-up action as indicated in Table 8.1, Permittees shall take the following actions, as also required by Provision C.1. If the trigger stressor or source is already known, proceed directly to step 2. The first follow-up action shall be initiated as soon as possible, and no later than the second fiscal year after the sampling event that triggered the Monitoring Project.
 - (1) Conduct a site specific study (or non-site specific if the problem is widespread) in a stepwise process to identify and isolate the cause(s) of the trigger stressor/source. This study should follow guidance for Toxicity Reduction Evaluations (TRE)⁴⁰ or Toxicity Identification Evaluations (TIE).⁴¹ A TRE, as adapted for urban stormwater data, allows Permittees to use other sources of information (such as industrial facility stormwater monitoring reports) in attempting to determine the trigger cause, potentially eliminating the need for a TIE. If a TRE does not result in identification of the stressor/source, Permittees shall conduct a TIE.
 - (2) Identify and evaluate the effectiveness of options for controlling the cause(s) of the trigger stressor/source.
 - (3) Implement one or more controls.
 - (4) Confirm the reduction of the cause(s) of trigger stressor/source.
 - (5) Stressor/Source Identification Project Cap: Permittees who conduct this monitoring through a regional collaborative shall be required to initiate no more than ten Stressor/Source Identification projects during the Permit term in total, and at least two must be toxicity follow-ups, unless monitoring results do not indicate the presence of toxicity. If conducted through a stormwater countywide program, the Santa Clara and Alameda

⁴⁰ USEPA. August 1999. *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants*. EPA/833B-99/002. Office of Wastewater Management, Washington, D.C.

⁴¹ Select TIE methods from the following references after conferring with SWAMP personnel: For sediment:
(1) Ho KT, Burgess R., Mount D, Norberg-King T, Hockett, RS. 2007. *Sediment toxicity identification evaluation: interstitial and whole methods for freshwater and marine sediments*. USEPA, Atlantic Ecology Division/Mid-Continental Ecology Division, Office of Research and Development, Narragansett, RI, or
(2) Anderson, BS, Hunt, JW, Phillips, BM, Tjeerdema, RS. 2007. *Navigating the TMDL Process: Sediment Toxicity*. Final Report- 02-WSM-2. Water Environment Research Federation. 181 pp. For water column:
(1) USEPA. 1991. *Methods for aquatic toxicity identification evaluations. Phase I Toxicity Characterization Procedures*. EPA 600/6-91/003. Office of Research and Development, Washington, DC., (2) USEPA. 1993. *Methods for aquatic toxicity identification evaluations. Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity*. EPA 600/R-92/080. Office of Research and Development, Washington, DC., or (3) USEPA. 1996. *Marine Toxicity Identification Evaluation (TIE), Phase I Guidance Document*. EPA/600/R-95/054. Office of Research and Development, Washington, DC.

Permittees each shall be required to initiate no more than five (two for toxicity); the Contra Costa and San Mateo Permittees each shall be required to initiate no more than three (one for toxicity); and the Fairfield-Suisun and Vallejo Permittees each shall be required to initiate no more than one Stressor/Source Identification project(s) during the Permit term.

- (6) As long as Permittees have complied with the procedures set forth above, they do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed to do so by the Water Board.
- ii. BMP Effectiveness Investigation** – Investigate the effectiveness of one BMP for stormwater treatment or hydrograph modification control. Permittees who do this project through a regional collaborative are required to initiate no more than one BMP Effectiveness Investigation during the Permit term. If conducted through a stormwater countywide program, the Santa Clara, Alameda, Contra Costa, and San Mateo Permittees shall be required to initiate one BMP Effectiveness Investigation each, and the Fairfield-Suisun and Vallejo Permittees shall be exempt from this requirement. The BMP(s) used to fulfill requirements of C.3.b.iii., C.11.e. and C.12.e. may be used to fulfill this requirement, provided the BMP Effectiveness Investigation includes the range of pollutants generally found in urban runoff. The BMP Effectiveness Investigation will not trigger a Stressor/Source Identification Project. Data from this Monitoring Project need not be SWAMP-comparable.
- iii. Geomorphic Project** – This monitoring is intended to answer the questions: How and where can our creeks be restored or protected to cost-effectively reduce the impacts of pollutants, increased flow rates, and increased flow durations of urban runoff?

Permittees shall select a waterbody/reach, preferably one that contains significant fish and wildlife resources, and conduct one of the following projects within each county, except that only one such project must be completed within the collective Fairfield-Suisun and Vallejo Permittees' jurisdictions:

- (1) Gather geomorphic data to support the efforts of a local watershed partnership⁴² to improve creek conditions; or
- (2) Inventory locations for potential retrofit projects in which decentralized, landscape-based stormwater retention units can be installed; or
- (3) Conduct a geomorphic study which will help in development of regional curves which help estimate equilibrium channel conditions for different-sized drainages. Select a waterbody/reach that is not undergoing changing land use. Collect and report the following data:
 - Formally surveyed channel dimensions (profile), planform, and cross-sections. Cross-sections shall include the topmost floodplain terrace and

⁴² A list of local watershed partnerships may be obtained from Water Board staff.

be marked by a permanent, protruding (not flush with ground) monument.

- Contributing drainage area.
- Best available information on bankfull discharges and width and depth of channel formed by bankfull discharges.
- Best available information on average annual rainfall in the study area.

Permittees shall complete the selected geomorphic project so that project results are reported in the Integrated Monitoring Report (see Provision C.8.g.v).

C.8.e. Pollutants of Concern and Long-Term Trends Monitoring

Pollutants of Concern (POC) monitoring is intended to assess inputs of Pollutants of Concern to the Bay from local tributaries and urban runoff, assess progress toward achieving wasteload allocations (WLAs) for TMDLs and help resolve uncertainties associated with loading estimates for these pollutants. In particular, there are four priority management information needs toward which POC monitoring must be directed: 1) identifying which Bay tributaries (including stormwater conveyances) contribute most to Bay impairment from pollutants of concern; 2) quantifying annual loads or concentrations of pollutants of concern from tributaries to the Bay; 3) quantifying the decadal-scale loading or concentration trends of pollutants of concern from small tributaries to the Bay; and 4) quantifying the projected impacts of management actions (including control measures) on tributaries and identifying where these management actions should be implemented to have the greatest beneficial impact.

Permittees shall implement the following POC monitoring components or pursue an alternative approach that addresses each of the aforementioned management information needs. An alternative approach may be pursued by Permittees provided that: either similar data types, data quality, data quantity are collected with an equivalent level of effort described; or an equivalent level of monitoring effort is employed to answer the management information needs.

Long-Term monitoring is intended to assess long-term trends in pollutant concentrations and toxicity in receiving waters and sediment, in order to evaluate if stormwater discharges are causing or contributing to toxic impacts on aquatic life. Permittees shall implement the following Long-Term monitoring components or, following approval by the Executive Officer, an equivalent monitoring program.

- i. Pollutants of Concern Loads Monitoring Locations** – Permittees shall conduct Pollutants of Concern monitoring at stations listed below. Permittees may install these stations in two phases providing at least half of the stations are monitored in the water year beginning October 2010, and all the stations are monitored in the water year beginning October 2012. Upon approval by the Executive Officer, Permittees may use alternate POC monitoring locations.

- (1) Castro Valley Creek S3 at USGS gauging station in Castro Valley
- (2) Guadalupe River
- (3) Zone 4 Line A at Chabot Road in Hayward
- (4) Rheem Creek at Giant Road in Richmond
- (5) Walnut Creek at a downstream location
- (6) Calabazas Creek at Lakeside Drive in Sunnyvale, at border with Santa Clara
- (7) San Mateo Creek at downstream location
- (8) Laurel Creek at Laurie Meadows park, off Casanova Drive in City of San Mateo.

ii. Long-Term Monitoring Locations – Permittees shall conduct Long-Term monitoring at stations listed below. After conferring with the Regional SWAMP program, and upon approval by the Executive Officer, Permittees may use alternate Long-Term monitoring locations.

Table 8.3. Long-Term Monitoring Locations

Stormwater Countywide Program	Waterbody	Suggested Location
Alameda Permittees	Alameda Creek OR	East of Alvarado Blvd*
	Lower San Leandro Creek	Empire Road*
Contra Costa Permittees	Kirker Creek OR	Floodway*
	Walnut Creek	Concord Avenue*
Santa Clara Permittees	Guadalupe River OR	USGS Gaging Station 11169025*
	Coyote Creek	Montague*
San Mateo Permittees	San Mateo Creek	Gateway Park*

* SWAMP is scheduled to collect sediment toxicity and sediment chemistry samples annually at these stations during the month of June.

iii. Parameters and Frequencies – Permittees shall conduct Pollutants of Concern sampling pursuant to Table 8.4, Categories 1 and 2. In Table 8.4, Category 1 pollutants are those for which the Water Board has active water quality attainment strategies (WQAS), such as TMDL or site-specific objective projects. Category 2 pollutants are those for which WQAS are in development. The lower monitoring frequency for Category 2 pollutants is sufficient to develop preliminary loading estimates for these pollutants.

Permittees shall conduct Long-Term monitoring pursuant to Table 8.4, Category 3. SWAMP has scheduled collection of Category 3 data at the Long-Term monitoring locations stated in C.8.e.ii. As stated in Provision C.8.a.iv., Permittees may use SWAMP data to fulfill Category 3 sampling requirements.

iv. Protocols – At a minimum, sampling and analysis protocols shall be consistent with 40 CFR 122.21(g)(7)(ii).

- v. **Methods** – Methyl mercury samples shall be grab samples collected during storm events that produce rainfall of at least 0.10 inch, shall be frozen immediately upon collection, and shall be kept frozen during transport to the laboratory. All other Category 1 and 2 samples shall be wet weather flow-weighted composite samples, collected during storm events that produce rainfall of at least 0.10 inch. Sampled storms should be separated by 21 days of dry weather, but, at a minimum, sampled storms must have 72 hours of antecedent dry weather. Samples must include the first rise in the hydrograph. Category 3 monitoring data shall be SWAMP-comparable.

Table 8.4 Pollutants of Concern Loads & Long-Term Monitoring Elements

Category/Parameter	Sampling Years	Minimum Sampling Occurrence	Sampling Interval
Category 1 <ul style="list-style-type: none"> • Total and Dissolved Copper • Total Mercury⁴³ • Methyl Mercury • Total PCBs⁴⁴ • Suspended Sediments (SSC) • Total Organic Carbon • Toxicity – Water Column • Nitrate as N • Hardness 	Annually	Average of 4 wet weather events per year For methyl mercury only: average of 2 wet & 2 dry weather events per year	Flow-weighted composite For methyl mercury only: grab samples collected during the first rise in the hydrograph of a storm event.
Category 2 <ul style="list-style-type: none"> • Total and Dissolved Selenium • Total PBDEs (Polybrominated Diphenyl Ethers) • Total PAHs (Poly-Aromatic Hydrocarbons) • Chlordane • DDTs (Dichloro-Diphenyl-Trichloroethane) • Dieldrin • Nitrate as N • Pyrethroids - bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin, and tralomethrin • Carbaryl and fipronil • Total and Dissolved Phosphorus 	Oct. 2010 - 2011 water year and Oct. 2012 - 2013 water year	2 times per year	Flow-weighted composite
Category 3 Toxicity – Bedded Sediment, fine-grained ⁴⁵	Biennially, Coordinate	Once per year, during April-June,	Grab sample

⁴³ The monitoring type and frequency shown for mercury is not sufficient to determine progress toward achieving TMDL load allocations. Progress toward achieving load allocations will be accomplished by assessing loads avoided resulting from treatment, source control, and pollution prevention actions.

⁴⁴ The monitoring type and frequency shown for PCBs is not sufficient to determine progress toward achieving TMDL load allocations. Progress toward achieving load allocations will be accomplished by assessing loads avoided resulting from treatment, source control, and pollution prevention actions.

Category/Parameter	Sampling Years	Minimum Sampling Occurrence	Sampling Interval
Pollutants – Bedded Sediment, fine-grained	with SWAMP	coordinate with SWAMP	

- vi. **Sediment Delivery Estimate/Budget** – The objective of this monitoring is to develop a strong estimate of the amount of sediment entering the Bay from local tributaries and urban drainages. By July 1, 2011, Permittees shall develop a design for a robust sediment delivery estimate/sediment budget in local tributaries and urban drainages. Permittees shall implement the study by July 1, 2012.
- vii. **Emerging Pollutants** – Permittees shall develop a work plan and schedule for initial loading estimates and source analyses for emerging pollutants: endocrine-disrupting compounds, PFOS/PFAS (Perfluorooctane Sulfonates (PFOS), Perfluoroalkyl sulfonates (PFAS); these perfluorocompounds are related to Teflon products), and NP/NPEs (nonylphenols/nonylphenol esters —estrogen-like compounds). This work plan, which is to be implemented in the next Permit term, shall be submitted with the Integrated Monitoring Report (see Provision C.8.g.).

C.8.f. Citizen Monitoring and Participation

- i. Permittees shall encourage Citizen Monitoring.
- ii. In developing Monitoring Projects and evaluating Status & Trends data, Permittees shall make reasonable efforts to seek out citizen and stakeholder information and comment regarding waterbody function and quality.
- iii. Permittees shall demonstrate annually that they have encouraged citizen and stakeholder observations and reporting of waterbody conditions. Permittees shall report on these outreach efforts in the annual Urban Creeks Monitoring Report.

C.8.g. Reporting

- i. **Water Quality Standard Exceedance** – When data collected pursuant to C.8.a.-C.8.f. indicate that stormwater runoff or dry weather discharges are or may be causing or contributing to exceedance(s) of applicable water quality standards, including narrative standards, a discussion of possible pollutant sources shall be included in the Urban Creeks Monitoring Report. When data collected pursuant to C.8.a.-C.8.f. indicate that discharges are causing or contributing to an exceedance of an applicable water quality standard, Permittees shall notify the Water Board within no more than 30 days of such a determination and submit a follow-up report in accordance with Provision C.1 requirements. The preceding reporting requirements shall not apply to

⁴⁵ If Ceriodaphnia, Hyalella azteca, or Pimephales survival or Selenastrum growth is < 50% of control results, repeat wet weather sample. If 2nd sample yields < 50% of control results, proceed to C.8.d.i.

continuing or recurring exceedances of water quality standards previously reported to the Water Board or to exceedances of pollutants that are to be addressed pursuant to Provisions C.8 through C.14 of this Order in accordance with Provision C.1.

- ii. **Status Monitoring Electronic Reporting** – Permittees shall submit an Electronic Status Monitoring Data Report no later than January 15 of each year, reporting on all data collected during the foregoing October 1–September 30 period. Electronic Status Monitoring Data Reports shall be in a format compatible with the SWAMP database.⁴⁶ Water Quality Objective exceedances shall be highlighted in the Report.
- iii. **Urban Creeks Monitoring Report** – Permittees shall submit a comprehensive Urban Creeks Monitoring Report no later than March 15 of each year, reporting on all data collected during the foregoing October 1–September 30 period, with the initial report due March 15, 2012, unless the Permittees choose to monitor through a regional collaborative, in which case the due date is March 15, 2013. Each Urban Creeks Monitoring Report shall contain summaries of Status, Long-Term, Monitoring Projects, and Pollutants of Concern Monitoring including, as appropriate, the following:
 - (1) Maps and descriptions of all monitoring locations;
 - (2) Data tables and graphical data summaries; Constituents that exceed applicable water quality standards shall be highlighted;
 - (3) For all data, a statement of the data quality;
 - (4) An analysis of the data, which shall include the following:
 - Calculations of biological metrics and physical habitat endpoints.
 - Comparison of biological metrics to:
 - Each other
 - Any applicable, available reference site(s)
 - Any applicable, available index of biotic integrity
 - Physical habitat endpoints.
 - Identification and analysis of any long-term trends in stormwater or receiving water quality.
 - (5) A discussion of the data for each monitoring program component, which shall:
 - Discuss monitoring data relative to prior conditions, beneficial uses and applicable water quality standards as described in the Basin Plan, the Ocean Plan, or the California Toxics Rule or other applicable water quality control plans.

⁴⁶ See <http://mpsl.mlml.calstate.edu/swdataformats.htm>. Permittees shall maintain an information management system that will support electronic transfer of data to the Regional Data Center of the *California Environmental Data Exchange Network (CEDEN)*, located within the San Francisco Estuary Institute.

- Where appropriate, develop hypotheses to investigate regarding pollutant sources, trends, and BMP effectiveness.
 - Identify and prioritize water quality problems.
 - Identify potential sources of water quality problems.
 - Describe follow-up actions.
 - Evaluate the effectiveness of existing control measures.
 - Identify management actions needed to address water quality problems.
- iv. Monitoring Project Reports** – Permittees shall report on the status of each ongoing Monitoring Project in each annual Urban Creeks Monitoring Report. In addition, Permittees shall submit stand-alone summary reports within six months of completing BMP Effectiveness and Geomorphic Projects; these reports shall include: a description of the project; map(s) of project locations; data tables and summaries; and discussion of results.
- v. Integrated Monitoring Report** – No later than March 15, 2014, Permittees shall prepare and submit an Integrated Monitoring Report through the regional collaborative monitoring effort on behalf of all participating Permittees, or on a countywide basis on behalf of participating Permittees, so that all monitoring conducted during the Permit term is reported.⁴⁷ This report shall be in lieu of the Annual Urban Creeks Monitoring Report due on March 15, 2014.

The report shall include, but not be limited to, a comprehensive analysis of all data collected pursuant to Provision C.8., and may include other pertinent studies. For Pollutants of Concern, the report shall include methods, data, calculations, load estimates, and source estimates for each Pollutant of Concern Monitoring parameter. The report shall include a budget summary for each monitoring requirement and recommendations for future monitoring. This report will be part of the next Report of Waste Discharge for the reissuance of this Permit.

- vi. Standard Report Content** –All monitoring reports shall include the following:
- The purpose of the monitoring and briefly describe the study design rationale.
 - Quality Assurance/Quality Control summaries for sample collection and analytical methods, including a discussion of any limitations of the data.
 - Brief descriptions of sampling protocols and analytical methods.
 - Sample location description, including waterbody name and segment and latitude and longitude coordinates.
 - Sample ID, collection date (and time if relevant), media (e.g., water, filtered water, bed sediment, tissue).
 - Concentrations detected, measurement units, and detection limits.

⁴⁷ Permittees who do not participate in the Regional Monitoring Group or in a stormwater countywide program must submit an individual Integrated Receiving Water Impacts Report.

- Assessment, analysis, and interpretation of the data for each monitoring program component.
- Pollutant load and concentration at each mass emissions station.
- A listing of volunteer and other non-Permittee entities whose data are included in the report.
- Assessment of compliance with applicable water quality standards.
- A signed certification statement.

vii. Data Accessibility – Permittees shall make electronic reports available through a regional data center, and optionally through their web sites. Permittees shall notify stakeholders and members of the general public about the availability of electronic and paper monitoring reports through notices distributed through appropriate means, such as an electronic mailing list.

C.8.h. Monitoring Protocols and Data Quality

Where applicable, monitoring data must be SWAMP comparable. Minimum data quality shall be consistent with the latest version of the SWAMP Quality Assurance Project Plan (QAPP)⁴⁸ for applicable parameters, including data quality objectives, field and laboratory blanks, field duplicates, laboratory spikes, and clean techniques, using the most recent Standard Operating Procedures. A Regional Monitoring Collaborative may adapt the SWAMP QAPP for use in conducting monitoring in the San Francisco Bay Region, and may use such QAPP if acceptable to the Executive Officer.

⁴⁸ The current SWAMP QAPP at the time of Permit issuance is dated September 1, 2008, and is available at http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/swamp_qapp_master090108a.pdf.

C.9. Pesticides Toxicity Control

To prevent the impairment of urban streams by pesticide-related toxicity, the Permittees shall implement a pesticide toxicity control program that addresses their own and others' use of pesticides within their jurisdictions that pose a threat to water quality and that have the potential to enter the municipal conveyance system. This provision implements requirements of the TMDL for Diazinon and Pesticide related Toxicity for Urban Creeks in the region. The TMDL includes urban runoff allocations for Diazinon of 100 ng/l and for pesticide related toxicity of 1.0 Acute Toxicity Units (TUa) and 1.0 Chronic Toxicity Units (TUC) to be met in urban creek waters. However, urban runoff management agencies (i.e., the Permittees) are not solely responsible for attaining the allocations because their authority to regulate pesticide use is constrained by federal and State law. Accordingly, the Permittees' requirements for addressing the allocations are set forth in the TMDL implementation plan and are included in this provision.

Pesticides of concern include: organophosphorous pesticides (chlorpyrifos, diazinon, and malathion); pyrethroids (bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin, and tralomethrin); carbamates (e.g., carbaryl); and fipronil. The Permittees may coordinate with BASMAA, the Urban Pesticide Pollution Prevention Project, the Urban Pesticide Committee, the Bay-Friendly Landscaping and Gardening Coalition, and other agencies and organizations in carrying out these activities.

C.9.a. Adopt an Integrated Pest Management (IPM) Policy or Ordinance

- i. **Task Description** – In their IPM policies or ordinances, the Permittees shall include provisions to minimize reliance on pesticides that threaten water quality and to require the use of IPM in municipal operations and on municipal property.
- ii. **Implementation Level** – If not already in place, the Permittees shall adopt IPM policies or ordinances no later than July 1, 2010.
- iii. **Reporting** – The Permittees shall submit a copy of their IPM ordinance(s) or policy(s) in their 2010 Annual Report.

C.9.b. Implement IPM Policy or Ordinance

- i. **Task Description** – The Permittees shall establish written standard operating procedures for pesticide use that ensure implementation of the IPM policy or ordinance and require municipal employees and contractors to adhere to the IPM standard operating procedures.
- ii. **Reporting**
 - (1) In their Annual Reports, the Permittees shall report on IPM implementation by showing trends in quantities and types of pesticide used, and suggest reasons for increases in use of pesticides that threaten water quality, specifically organophosphorous pesticides, pyrethroids, carbaryl, and fipronil.

- (2) The Permittees shall maintain pesticide application standard operating procedures and submit them upon request.

C.9.c. Train Municipal Employees

- i. Task Description** – The Permittees shall ensure that all municipal employees who, within the scope of their duties, apply or use pesticides that threaten water quality are trained in IPM practices and the Permittee’s IPM policy. This training may also include other training opportunities such as Bay-Friendly Landscape Maintenance Training & Qualification Program and EcoWise Certified.
- ii. Reporting**
 - (1) In their Annual Reports, the Permittees shall report the percentage of municipal employees who apply pesticides who have received training in IPM policy and IPM standard operating procedures within the last three years.
 - (2) The Permittees shall submit training materials (e.g., course outline, date, attendees) upon request.

C.9.d. Require Contractors to Implement IPM

- i. Task Description** – The Permittees shall hire IPM-certified contractors or include contract specifications requiring contractors to implement IPM no later than July 1, 2010.
- ii. Reporting** – In their Annual Reports, the Permittees shall submit documentation to confirm compliance, such as the Permittee’s standard contract specification or copy of contractors’ certification(s).

C.9.e. Track and Participate in Relevant Regulatory Processes (may be done jointly with other Permittees, such as through CASQA or BASMAA and/or the Urban Pesticide Pollution Prevention Project)

- i. Task Description**
 - (1) The Permittees shall track USEPA pesticide evaluation and registration activities as they relate to surface water quality, and when necessary, encourage USEPA to coordinate implementation of the Federal Insecticide, Fungicide, and Rodenticide Act and the CWA and to accommodate water quality concerns within its pesticide registration process;
 - (2) The Permittees shall track California Department of Pesticide Regulation (DPR) pesticide evaluation activities as they relate to surface water quality, and when necessary, encourage DPR to coordinate implementation of the California Food and Agriculture Code with the California Water Code and to accommodate water quality concerns within its pesticide evaluation process;

- (3) The Permittees shall assemble and submit information (such as monitoring data) as needed to assist DPR and County Agricultural Commissioners in ensuring that pesticide applications comply with water quality standards; and
 - (4) As appropriate, the Permittees shall submit comment letters on USEPA and DPR re-registration, re-evaluation, and other actions relating to pesticides of concern for water quality.
- ii. **Reporting** – In their Annual Reports, the Permittees who participate in a regional effort to comply with C.9.e. may reference a regional report that summarizes regional participation efforts, information submitted, and how regulatory actions were affected. All other Permittees shall list their specific participation efforts, information submitted, and how regulatory actions were affected.

C.9.f. Interface with County Agricultural Commissioners

- i. **Task Description** – The Permittees shall maintain regular communications with county agricultural commissioners (or other appropriate State and/or local agencies) to (1) get input and assistance on urban pest management practices and use of pesticides, (2) inform them of water quality issues related to pesticides, and (3) report violations of pesticide regulations (e.g., illegal handling) associated with stormwater management.
- ii. **Reporting** – In their Annual Reports, the Permittees shall summarize improper pesticide usage reported to county agricultural commissioners and report follow-up actions to correct violations.

C.9.g. Evaluate Implementation of Source Control Actions Relating to Pesticides

- i. **Task Description** – The Permittees shall evaluate the effectiveness of the control measures implemented, evaluate attainment of pesticide concentration and toxicity targets for water and sediment from monitoring data (Provision C.8.), and identify improvements to existing control measures and/or additional control measures, if needed, to attain targets with an implementation time schedule.
- ii. **Reporting** – In their 2013 Annual Reports, the Permittees shall report the evaluation results, and if needed, submit a plan to implement improved and/or new control measures.

C.9.h. Public Outreach (may be done jointly with other Permittees, such as through CASQA or BASMAA and/or the Urban Pesticide Pollution Prevention Project or the Bay-Friendly Landscaping and Gardening Coalition).

- i. **Point of Purchase Outreach:** The Permittees shall:
- (1) Conduct outreach to consumers at the point of purchase;

- (2) Provide targeted information on proper pesticide use and disposal, potential adverse impacts on water quality, and less toxic methods of pest prevention and control; and
 - (3) Participate in and provide resources for the “Our Water, Our World” program or a functionally equivalent pesticide use reduction outreach program.
- ii. Reporting** – In their Annual Reports, the Permittees who participate in a regional effort to comply with C.9.h.i. may reference a report that summarizes these actions. All other Permittees shall summarize activities completed and document any measurable awareness and behavior changes resulting from outreach.
- iii. Pest Control Contracting Outreach:** The Permittees shall conduct outreach to residents who use or contract for structural or landscape pest control and shall:
- (1) Provide targeted information on proper pesticide use and disposal, potential adverse impacts on water quality, and less toxic methods of pest prevention and control, including IPM;
 - (2) Incorporate IPM messages into general outreach;
 - (3) Provide information to residents about “Our Water, Our World” or functionally equivalent program;
 - (4) Provide information to residents about EcoWise Certified IPM certification in Structural Pest Management, or functionally equivalent certification program; and
 - (5) Coordinate with household hazardous-waste programs to facilitate appropriate pesticide waste disposal, conduct education and outreach, and promote appropriate disposal.
- iv. Reporting** – In their 2013 Annual Reports, the Permittees who participate in a regional effort to comply with C.9.h.iii. may reference a report that summarizes these actions. All other Permittees shall document the effectiveness of their actions in their 2013 Annual Reports. This documentation may include percentages of residents hiring certified IPM providers and the change in this percentage.
- v. Outreach to Pest Control Operators:** The Permittees shall conduct outreach to pest control operators (PCOs) and landscapers; Permittees are encouraged to work with DPR, county agricultural commissioners, UC-IPM, BASMAA, the Urban Pesticide Committee, the EcoWise Certified Program (or functionally equivalent certification program), the Bio-integral Resource Center and others to promote IPM to PCOs and landscapers.
- vi. Reporting** – In each Annual Report, the Permittees who participate in a regional effort to comply with C.9.h.v. may reference a report that summarizes these actions. All other Permittees shall summarize how they reached PCOs and landscapers and reduced pesticide use.

C.10. Trash Load Reduction

The Permittees shall demonstrate compliance with Discharge Prohibition A.2 and trash-related Receiving Water Limitations through the timely implementation of control measures and other actions to reduce trash loads from municipal separate storm sewer systems (MS4s) by 40% by 2014, 70% by 2017, and 100% by 2022 as further specified below.

During this permit term, the Permittees shall develop and implement a Short-Term Trash Load Reduction Plan. This includes implementation of a mandatory minimum level of trash capture; cleanup and abatement progress on a mandatory minimum number of Trash Hot Spots; and implementation of other control measures and best management practices, such as trash reduction ordinances, to prevent or remove trash loads from MS4s to attain a 40% reduction in trash loads by July 1, 2014. The Permittees shall also develop and begin implementation of a Long-Term Trash Load Reduction Plan to attain a 70% reduction in trash loads from their MS4s by 2017 and 100% by 2022. Flood management agencies, which are non-population-based Permittees that do not have jurisdiction over urban watershed land, are not subject to these trash reduction requirements except for minimum full trash capture and Trash Hot Spot requirements, as specified in subsections C.10.a.iii and C.10.b below.

C.10.a. Short-Term Trash Load Reduction

- i. **Short-Term Trash Loading Reduction Plan** – Each Permittee shall submit a Short-Term Trash Load Reduction Plan, including an implementation schedule, to the Water Board by February 1, 2012. The Plan shall describe control measures and best management practices, including any trash reduction ordinances, that are currently being implemented and the current level of implementation and additional control measures and best management practices that will be implemented, and/or an increased level of implementation designed to attain a 40% trash load reduction from its MS4 by July 1, 2014.

The Short-Term Trash Load Reduction Plan shall account for required mandatory minimum Full Trash Capture devices called for in Provision C.10.a.iii and Trash Hot Spot Cleanup called for in Provision C.10.b.

- ii. **Baseline Trash Load and Trash Load Reduction Tracking Method** – Each Permittee, working collaboratively or individually, shall determine the baseline trash load from its MS4 to establish the basis for trash load reductions and submit the determined load level to the Water Board by February 1, 2012, along with documentation of methodology used to determine the load level. The submittal shall also include a description of the trash load reduction tracking method that will be used to account for trash load reduction actions and to demonstrate progress and attainment of trash load reduction levels. The submittal shall account for the drainage areas of a Permittee's jurisdiction that are associated with the baseline trash load from its MS4, and the baseline trash load level per unit area by land use type and drainage area characteristics used to derive the total baseline trash load level for each Permittee.

In the determination of applicable areas that generate trash loads for inclusion in the Baseline Trash Load, the Permittees may propose areas for exclusion, with

supporting documentation, which meet Discharge Prohibition A.2 and trash-related Receiving Water Limitations. Documentation demonstrating no material trash presence or adverse impact may include data from the maintenance of existing trash capture devices, data from trash flux measurements in the MS4 and the water column of streams during wet weather, Trash Hot Spot assessments, and litter audits of street curb and gutter areas in high pedestrian traffic and high commercial activity areas.

If proposed areas for exclusion are commercial, industrial, or high density residential areas, or adjacent to schools or event venues, the Permittee shall collect and submit by February 1, 2013, an additional year of documentation to further support the basis for the exclusion. If the data continue to support the exclusion determination, further trash reduction actions are not required in these areas, unless the Water Board notifies the Permittee otherwise.

Each Permittee shall submit a progress report by February 1, 2011, that indicates whether it is determining its baseline trash load and trash load reduction method individually or collaboratively with other Permittees and a summary of the approach being used. The report shall also include the types and examples of documentation that will be used to propose exclusion areas, and the land use characteristics and estimated area of potentially excluded areas.

- iii. Minimum Full Trash Capture** – Except as excluded below, population-based Permittees shall install and maintain a mandatory minimum number of full trash capture devices by July 1, 2014, to treat runoff from an area equivalent to 30% of Retail/Wholesale Land⁴⁹ that drains to MS4s within their jurisdictions (see Table 10.1 in Attachment J). If the sum of the areas that generate trash loads determined pursuant to C.10.a.ii above is a smaller acreage than the required trash capture acreage, a population-based Permittee may reduce its minimum full trash capture requirement to the smaller acreage. A population-based Permittee with a population less than 12,000 and retail/wholesale land less than 40 acres, or a population less than 2000, is exempt from this trash capture requirement. The minimum number of trash capture devices required to be installed and maintained by non-population-based Permittees is included in Attachment J.

All installed devices that meet the following full trash capture definition may be counted toward this requirement regardless of date of installation. A full capture system or device is any single device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate Q resulting from a one-year, one-hour, storm in the sub-drainage area.

⁴⁹ [<http://quake.abag.ca.gov/mitigation/pickdbh2.html>] and Association of Bay Area Governments, 2005 ABAG Land Use Existing Land Use in 2005: Report and Data for Bay Area Counties

C.10.b. Trash Hot Spot Selection and Cleanup

Trash Hot Spots in receiving waters shall be cleaned annually to achieve the multiple benefits of beginning abatement of these impacts as mitigation and to learn more about the sources and patterns of trash loading.

- i. Hot Spot Cleanup and Definition** – The Permittees shall cleanup selected Trash Hot Spots to a level of “no visual impact” at least one time per year for the term of the permit. Trash Hot Spots shall be at least 100 yards of creek length or 200 yards of shoreline length.
- ii. Hot Spot Selection** – Population-based Permittees shall identify high trash-impacted locations on State waters totaling at least one Trash Hot Spot per 30,000 population, or one per 100 acres of Retail/Wholesale Commercial Land Area, within their jurisdictions based on Association of Bay Area Governments (ABAG) 2005 data1, whichever is greater. If the hot spot number by one of the two determination methods is more than twice that determined by the other method, double the smaller hot spot number shall be used. Otherwise, the larger hot spot number determined by the two methods shall be the Trash Hot Spot assignment for a population-based Permittee. Each population-based Permittee shall select at least one Trash Hot Spot. The Permittees shall each submit selected Trash Hot Spots to the Water Board by July 1, 2010. The list should include photo documentation (one photo per 50 feet) and initial assessment results for the proposed hot spots. The minimum number of Trash Hot Spots per Permittee is included in Attachment J for population and non-population-based Permittees. The Permittees shall proceed with cleanup of selected Trash Hot Spots unless informed otherwise by the Water Board.
- iii. Hot Spot Assessments** – The Permittees shall quantify the volume of material removed from each Trash Hot Spot cleanup, and identify the dominant types of trash (e.g., glass, plastics, paper) removed and their sources to the extent possible. Documentation shall include the trash condition before and after clean up of the entire hot spot using photo documentation with a minimum of one photo per 50 feet of hot spot length. Trash Hot Spots may also be assessed using either the Rapid Trash Assessment (RTA v.8) or the SCVURPPP Urban RTA variation of that method.

C.10.c. Long-Term Trash Load Reduction

Each Permittee shall submit a Long-Term Trash Load Reduction Plan, including an implementation schedule, to the Water Board by February 1, 2014. The Plan shall describe control measures and best management practices, including any trash reduction ordinances, that are being implemented and the level of implementation and additional control measures and best management practices that will be implemented, and/or an increased level of implementation designed to attain a 70% trash load reduction from its MS4 by July 1, 2017, and 100% by July 1, 2022.

C.10.d. Reporting

- i.** In each Annual Report, each Permittee shall provide a summary of its trash load reduction actions (control measures and best management practices) including the types of actions and levels of implementation, the total trash loads and dominant types of trash removed by its actions, and the total trash loads and dominant types of trash for each type of action. The latter shall include each Trash Hot Spot selected pursuant to C.10.b. Beginning with the 2012 Annual Report, each Permittee shall also report its percent annual trash load reduction relative to its Baseline Trash Load.
- ii.** The Permittees shall retain records for review providing supporting documentation of trash load reduction actions and the volume and dominant type of trash removed from full trash capture devices, from each Trash Hot Spot cleanup, and from additional control measures or best management practices implemented. Data may be combined for specific types of full trash capture devices deployed in the same drainage area. These records shall have the specificity required for the trash load reduction tracking method established pursuant to subsection C.10.a.iii.

C.11. Mercury Controls

The Permittees shall implement the following control programs for mercury. The Permittees shall perform the control measures and provide reporting on those control measures according to the provisions below. The purpose of this provision is to implement the urban runoff requirements of the San Francisco Bay mercury TMDL and reduce mercury loads to make substantial progress toward achieving the urban runoff mercury load allocation established for the TMDL. The aggregate, regionwide, urban runoff wasteload load allocation is 82 kg/yr. This allocation should be achieved by February 2028 and, as a way to measure progress, an interim loading milestone of 120 kg/yr, halfway between the current load and the allocation, should be achieved by February 2018. If the interim loading milestone is not achieved, the Permittees shall demonstrate reasonable and measurable progress toward achieving the milestone. The Permittees may comply with any requirement of this provision through a collaborative effort.

C.11.a. Mercury Collection and Recycling Implemented throughout the Region

- i. **Task Description** – The Permittees shall promote, facilitate, and/or participate in collection and recycling of mercury containing devices and equipment at the consumer level (e.g., thermometers, thermostats, switches, bulbs).
- ii. **Reporting** – The Permittees shall report on these efforts in their Annual Report, including an estimate of the mass of mercury collected.

C.11.b. Monitor Methylmercury

- i. **Task Description** – The Permittees shall monitor methylmercury in runoff discharges. The objective of the monitoring is to investigate a representative set of drainages and obtain seasonal information and to assess the magnitude and spatial/temporal patterns of methylmercury concentrations.
- ii. **Implementation Level** – The Permittees shall analyze aqueous grab samples already being collected for total mercury analysis for methylmercury as specified in Provision C.8.f.
- iii. **Reporting** – The Permittees shall report monitoring results annually beginning with their 2010 Annual Report.

C.11.c. Pilot Projects To Investigate and Abate Mercury Sources in Drainages, Including Public Rights-Of-Way, and Stormwater Conveyances with Accumulated Sediment that Contains Elevated Mercury Concentrations.

- i. **Task Description** – The Permittees shall investigate and abate mercury sources in or to their storm drain systems in conjunction with the Water Board and other appropriate regulatory agencies with investigation and cleanup authorities. The purpose of this task is to implement and evaluate the benefit of a suite of abatement measures at five pilot project locations. The Permittees shall document the knowledge and experience gained through pilot implementation,

and this documentation will provide a basis for determining the scope of abatement implementation in subsequent permit terms. The Permittees shall also quantify and report the amount of mercury loads abated resulting from implementation of these measures.

- ii. Implementation Level** – Reducing loads of PCBs is the main pilot location selection factor for this Provision, and reducing loads of mercury is a secondary criterion. Accordingly, for PCB pilot project locations selected as part of Provision C.12.c, the Permittees shall conduct reconnaissance in the pilot project drainage areas. The Permittees shall test sediments in storm drains and conveyances to characterize the extent and magnitude of mercury concentrations. They shall evaluate monitoring data and determine if a mercury sediment abatement program would reduce mercury loading significantly. If so determined, the Permittees shall cause abatement activities to be conducted at those sites under Permittee jurisdiction with identified remedial activities. When contamination is located on private property, a Permittee must either exercise direct authority to require cleanup or notify and request other appropriate authorities to exercise their cleanup authority.
- iii. Reporting** – Report on mercury-related aspects of work and loads abated as part of reporting requirements for Provision C.12.c.

C.11.d. Pilot Projects to Evaluate and Enhance Municipal Sediment Removal and Management Practices

- i. Task Description** – The Permittees shall jointly evaluate ways to enhance mercury load reduction benefits of operation and maintenance activities that remove or manage sediment. The purpose of this task is to implement these management practices at the pilot scale in five drainages during this permit term. The knowledge and experience gained through pilot implementation will be used to determine the implementation scope of enhanced sediment removal and management practices in subsequent permit terms. The Permittees shall document the knowledge and experience gained through pilot implementation, and this documentation will provide a basis for determining the implementation scope of enhanced sediment removal management practices in subsequent permit terms. The Permittees shall also quantify and report the amount of mercury loads removed or avoided resulting from implementation of these measures.
- ii. Implementation Level** – In all pilot program drainages selected as part of Provision C.12.c, the Permittees shall jointly evaluate ways to enhance existing sediment removal and management practices such as municipal street sweeping, curb clearing parking restrictions, inlet cleaning, catch basin cleaning, stream and stormwater conveyance system maintenance, and pump station cleaning via increased effort and/or retrofits for the control of mercury. This evaluation shall also include consideration of street flushing and capture, collection, or routing to the sanitary sewer (in coordination and consultation with local sanitary sewer agencies) as a potential enhanced management practice in coordination and consultation with local sanitary sewer agencies.

Beginning July 1, 2011, the Permittees shall implement pilot studies for the most potentially effective measures(s) based on the evaluation of Provision C.11.d.ii in all drainages for which PCB pilot projects are being conducted.

iii. Reporting

- (1) The Permittees shall present a progress report on the results of the evaluation in their 2010 Annual Report and the final evaluation results in their 2011 Annual Report.
- (2) In their March 15, 2014 Integrated Monitoring Report, the Permittees shall report the effectiveness of enhanced practices pilot implementation, report estimates of loads reduced, and present a plan and schedule for possible expanded implementation for subsequent permit terms.

C.11.e. Conduct Pilot Projects to Evaluate On-Site Stormwater Treatment via Retrofit

- i. Task Description – The Permittees shall evaluate and quantify the removal of mercury by on-site treatment systems via retrofit of such systems into existing storm drain systems. The purpose of this task is to implement on-site treatment projects at the pilot scale in ten locations during this permit term. The Permittees shall document the knowledge and experience gained through pilot implementation, and this documentation will provide a basis for determining the implementation scope of on-site treatment retrofits in subsequent permit terms. The Permittees shall also quantify and report the amount of mercury loads removed or avoided resulting from implementation of these measures.
- ii. Implementation Level – The Permittees, working collaboratively, shall identify at least ten locations throughout the Permittees’ jurisdictions that present opportunities to install and evaluate⁵⁰ on-site treatment systems (e.g., detention basins, bioretention units, sand filters, infiltration basins, treatment wetlands) and shall assess best treatment options for those locations. Every county (San Mateo, Contra Costa, Alameda, Santa Clara, and Solano) should have at least one location. This effort shall identify potential locations draining a variety of land uses; evaluate technical feasibility; and discuss economical feasibility. The pilot locations may be the same as those chosen for Provision C.12.e, but consideration should be given to areas of elevated mercury concentrations.

On the basis of the Provision C.11.e.ii report, the Permittees shall select sites to perform pilot studies and shall conduct pilot studies in ten selected locations. Pilot studies shall span treatment types and drainage characteristics.

iii. Reporting –

- (1) In their 2011 Annual Report, the Permittees shall report on candidate locations and types of treatment retrofit for each location. The report shall include assessment of at least ten locations.

⁵⁰ Permittees may evaluate a maximum of two pre-existing treatment systems of the ten total required systems to be evaluated provided that these existing treatment systems are applicable to the intent of this provision..

- (2) In their March 15, 2014 Integrated Monitoring Report, the Permittees shall report status, results, mercury removal effectiveness, and lessons learned from the ten pilot studies and their plan for implementing this type of treatment on an expanded basis throughout their jurisdictions during the next permit term.

C.11.f. Diversion of Dry Weather and First Flush Flows to Publicly Owned Treatment Works (POTWs)

- i. **Task Description** – The Permittees shall evaluate the reduced loads of mercury from diversion of dry weather and first flush stormwater flows to sanitary sewers. The Permittees shall document the knowledge and experience gained through pilot implementation, and this documentation will provide a basis for determining the implementation scope of urban runoff diversion projects in subsequent permit terms. The Permittees shall also quantify and report the amount of mercury loads removed or avoided resulting from implementation of these measures.
- ii. **Implementation Level** – The Permittees shall implement pilot projects to divert dry weather and first flush flows to POTWs to address these flows as a source of PCBs and mercury to receiving waters. The Permittees are strongly encouraged to make use of stormwater pump stations in this effort because pump station characterization work performed pursuant to Provisions C.2 and C.10, addressing dissolved oxygen depletion and trash impacts, may be efficiently leveraged for the initial phase of these diversion pilot projects. The objectives of this Provision are to: implement five pilot projects for urban runoff diversion from stormwater pump stations to POTWs; evaluate the reduced loads of mercury and PCBs resulting from each diversion; and gather information to guide the selection of additional diversion projects in future permits. Collectively, the Permittees shall select five stormwater pump stations and five alternates by evaluating drainage characteristics and the feasibility of diverting flows to the sanitary sewer.
 - (1) The Permittees should work with local POTWs on a watershed, county, or regional level to evaluate feasibility and to establish cost sharing agreements. The feasibility evaluation shall include, but not be limited to, costs, benefits, and impacts on the stormwater and wastewater agencies and the receiving waters relevant to the diversion and treatment of the dry weather and first flush flows.
 - (2) From this feasibility evaluation, the Permittees shall select five pump stations and five alternates for pilot diversion studies. At least one urban runoff diversion pilot project shall be implemented in each of the five counties (San Mateo, Contra Costa, Alameda, Santa Clara, and Solano). The pilot and alternate locations should be located in industrially-dominated catchments where elevated PCB concentrations are documented.

- (3) The Permittees shall implement flow diversion to the sanitary sewer at five pilot pump stations. As part of the pilot studies, the Permittees shall monitor, measure, and report mercury load reduction.

iii. Reporting

- (1) The Permittees shall summarize the results of the feasibility evaluation in their 2010 Annual Report, including:
 - Selection criteria leading to the identification of the five candidate and five alternate pump stations for pilot studies.
 - Time schedules for conducting the pilot studies.
 - A proposed method for distributing mercury load reductions to participating wastewater and stormwater agencies.
- (2) The Permittees shall report annually on the status of the pilot studies in each subsequent Annual Report.
- (3) The Permittees shall include in their March 15, 2014 Integrated Monitoring Report:
 - Evaluation of pilot program effectiveness.
 - Mercury loads reduced.
 - Updated feasibility evaluation procedures to guide future diversion project selection.

C.11.g. Monitor Stormwater Mercury Pollutant Loads and Loads Reduced

- i. Task Description** – The Permittees shall develop and implement a monitoring program to quantify mercury loads and loads reduced through source control, treatment and other management measures as required in Provision C.8.f.
- ii. Implementation Level** – The Permittees shall demonstrate progress toward (a) the interim loading milestones, or (b) attainment of the program area allocations, by using the following methods:
 - (1) Quantify through estimates the annual average mercury load reduced by implementing pollution prevention, source control and treatment control efforts required by the provisions of this permit or other relevant efforts; or
 - (2) Quantify the mercury load as a rolling five-year annual average using data on flow and water column mercury concentrations; or
 - (3) Quantitatively demonstrate that the mercury concentration of suspended sediment that best represents sediment discharged with urban runoff is below the target of 0.2 mg mercury/kg dry weight.

iii. Reporting

- (1) The Permittees shall report in their 2010 Annual Report methods used to assess progress toward meeting WLA goals and a full description of the

measurement and estimation methodology and rationale for the approaches.

- (2) The Permittees shall report in their March 15, 2014 Integrated Monitoring Report results of chosen monitoring/measurement approach concerning loads assessment and estimation of loads reduced.

C.11.h. Fate and Transport Study of Mercury in Urban Runoff

- i. **Task Description** – The Permittees shall conduct or cause to be conducted studies aimed at better understanding the fate, transport, and biological uptake of mercury discharged in urban runoff to San Francisco Bay and tidal areas.
- ii. **Implementation Level** – The specific information needs include understanding the in-Bay transport of mercury discharged in urban runoff, the influence of urban runoff on the patterns of food web mercury accumulation, and the identification of drainages where urban runoff mercury is particularly important in food web accumulation.
- iii. **Reporting** – The Permittees shall submit in their 2010 Annual Report a work plan describing the specific manner in which these information needs will be accomplished and describing the studies to be performed with a schedule. The Permittees shall report on status of these studies in their 2010, 2011, and 2012 Annual Reports. In the March 15, 2014 Integrated Monitoring Report, the Permittees shall report the findings and results of the studies completed, planned, or in progress as well as implications of studies on potential control measures to be investigated, piloted or implemented in future permit cycles.

C.11.i. Development of a Risk Reduction Program Implemented Throughout the Region.

- i. **Task Description** – The Permittees shall develop and implement or participate in effective programs to reduce mercury-related risks to humans and quantify the resulting risk reductions from these activities.
- ii. **Implementation Level** – The risk reduction activities shall include investigating ways to address public health impacts of mercury in San Francisco Bay/Delta fish, including activities that reduce actual and potential exposure of health impacts to those people and communities most likely to be affected by mercury in San Francisco Bay-caught fish, such as subsistence fishers and their families. Such strategies should include public participation in developing effective programs in order to ensure their effectiveness. The Permittees may include studies needed to establish effective exposure reduction activities and risk communication messages as part of their planning. The risk reduction activities may be performed by a third party if the Permittees wish to provide funding for this purpose. This requirement may be satisfied by a combination of related efforts through the Regional Monitoring Program or other similar collaborative efforts.

- iii. **Reporting** – The Permittees shall submit in their 2010 Annual Report the specific manner in which these risk reduction activities will be accomplished and describe the studies to be performed with a schedule. The Permittees shall report on the status of the risk reduction efforts in their 2011 and 2012 Annual Reports. The Permittees shall report the findings and results of the studies completed, planned, or in progress as well as the status of other risk reduction actions in their March 15, 2014 Integrated Monitoring Report.

C.11.j. Develop Allocation Sharing Scheme with Caltrans.

- i. **Task Description** – The wasteload allocations for urban stormwater developed through the San Francisco Bay mercury TMDL implicitly include California Department of Transportation (Caltrans) roadway and non-roadway facilities within the geographic boundaries of urban runoff management agencies. Consistent with the TMDL, the Permittees are required to develop an equitable mercury allocation-sharing scheme in consultation with Caltrans to address the Caltrans facilities in the program area, and report the details to the Water Board. Alternatively, Caltrans may choose to implement mercury load reduction actions on a watershed or regionwide basis in lieu of sharing a portion of an urban runoff management agencies' mercury allocation. In such a case, the Water Board will consider a separate allocation for Caltrans for which it may demonstrate progress toward attaining an allocation or load reduction in the same manner as municipal programs.
- ii. **Reporting** – The Permittees shall report on the status of the efforts to develop this allocation sharing scheme in their 2010, 2011, and 2012 Annual Reports. The Permittees shall submit in their March 15, 2014 Integrated Monitoring Report the manner in which the urban runoff mercury TMDL allocation will be shared between the Permittees and Caltrans.

C.12. Polychlorinated Biphenyls (PCBs) Controls

The Permittees shall implement the following control programs for PCBs. The Permittees shall perform the control measures and provide reporting on those control measures according to the provisions below. The purpose of these provisions is to implement the urban runoff requirements of the PCBs TMDL and reduce PCBs loads to make substantial progress toward achieving the urban runoff PCBs load allocation. The Permittees may comply with any requirement of this Provision through a collaborative effort.

C.12.a. Implement Project throughout Region to Incorporate PCBs and PCB-Containing Equipment Identification into Existing Industrial Inspections

- i. **Task Description** – The Permittees shall develop training materials and train municipal industrial building inspectors to identify, in the course of their existing inspections, PCBs or PCB-containing equipment. The Permittees shall incorporate such PCB identification into industrial inspection programs.
- ii. **Implementation Level** – Where inspectors identify during inspections PCBs or PCB-containing equipment, the Permittees shall document incidents in inspection reports and refer to appropriate regulatory agencies (e.g. county health departments, Department of Toxic Substances Control, California Department of Public Health, and the Water Board) as necessary.
- iii. **Reporting** – The Permittees shall report the results of training in their 2010 Annual Report and report on both ongoing training development and inspections for PCB identification in their 2011, and following, Annual Reports.

C.12.b. Conduct Pilot Projects to Evaluate Managing PCB-Containing Materials and Wastes during Building Demolition and Renovation (e.g., Window Replacement) Activities

- i. **Task Description** – The Permittees shall evaluate potential presence of PCBs at construction sites, current material handling and disposal regulations/programs (e.g., municipal ordinances, RCRA, TSCA) and current level of implementation.
- ii. **Implementation Level** –
 - (1) The Permittees shall develop a sampling and analysis plan to evaluate PCBs at construction sites that involve demolition activities (including research on when, where, and which materials potentially contained PCBs).
 - (2) The Permittees shall implement a sampling and analysis plan at a minimum of 10 sites distributed throughout the combined Permittees' jurisdiction areas.
 - (3) The Permittees shall develop/select BMPs to reduce or prevent discharges of PCBs during demolition/remodeling. The BMPs will focus on methods

to identify, handle, contain, transport and dispose of PCB-containing building materials.

- (4) The Permittees shall develop model ordinances or policies, train and deploy inspectors, and pilot test BMPs at 5 sites.

iii. Reporting –

- (1) In their 2010 Annual Report, the Permittees shall submit the sampling and analysis plan (of Provision C.12.b.ii.).
- (2) In their 2010 Annual Report, the Permittees shall submit a status report on sampling and analysis along with whatever sampling results are available.
- (3) In their 2011 Annual Report, the Permittees shall submit the results of the evaluation (Provision C.12.b.i.) of current regulations, level of implementation, and regulatory gaps as well as the final sampling and analysis report, a list of appropriate BMPs, BMP training program, and model ordinances and policies to prevent PCB discharges from building demolition and improvement activities.
- (4) In the March 15, 2014 Integrated Monitoring Report, the Permittees shall submit the results of pilot program effectiveness evaluation.

C.12.c. Pilot Projects to Investigate and Abate On-land Locations with Elevated PCB Concentrations, Including Public Rights-of-way, and Stormwater Conveyances with Accumulated Sediments with Elevated PCBs Concentrations.

i. Task Description – The Permittees shall investigate and abate PCBs sources in or to their storm drain systems in conjunction with the Water Board and other appropriate regulatory agencies with investigation and cleanup authorities. The purpose of this task is to implement and evaluate the benefit of a suite of abatement measures at five pilot project locations. The Permittees shall document the knowledge and experience gained through pilot implementation, and this documentation will provide a basis for determining the implementation scope of abatement projects in subsequent permit terms. The Permittees shall also quantify and report the amount of PCBs loads abated resulting from implementation of these measures.

ii. Implementation Level –

- (1) The Permittees, working collaboratively, shall identify 5 drainage areas that contain high levels of PCBs and conduct pilot projects to investigate and abate these high PCB concentrations. To accomplish this, the Permittees shall interview municipal staff and review municipal databases, data collected or compiled through grant-funded efforts, other agency files, and other available information to identify potential PCB source areas and areas where PCB-contaminated sediment accumulates, including within stormwater conveyances. The Permittees shall qualitatively rank and map potential PCB source areas within each drainage. Investigation of mercury (Provision C.11.c.) shall be included in these efforts unless not

appropriate. When contamination is located on private property, the Permittees must either exercise direct authority to require cleanup or notify and request other appropriate authorities to exercise their cleanup authority.

- (2) The Permittees shall conduct reconnaissance surveys of the identified drainages and gather information concerning past or current use of PCBs to further identify potential source areas and determine whether runoff from such locations is likely to convey soils/sediments with PCBs to municipal stormwater conveyances.
- (3) The Permittees shall validate existence of elevated PCB concentrations through surface soil/sediment sampling and analysis where visual inspections and/or other information suggest potential source areas within each drainage.

Where data confirm significantly elevated PCB concentrations in surface soils/sediments within the subject pilot drainage, the Permittees shall provide available information on current site conditions and owner/operators and other potentially responsible parties to Water Board and other appropriate regulatory agencies to facilitate their issuance of orders for further investigation and remediation of subject sites. The Permittees shall assist the Water Board and other appropriate agencies to identify/evaluate funding to perform abatement and/or responsible parties and abatement options.

- (4) The Permittees shall identify areas for expedited abatement on the basis of loading potential including factors such as PCB concentration, mass of sediment, and mobilization potential and/or human health protection thresholds, such as California Human Health Screening Levels.
- (5) The Permittees shall conduct an abatement program in portions of drainages under their jurisdiction in conjunction with the Water Board and other appropriate agencies.

iii. Reporting

- (1) The Permittees shall report on the identified suspect drainage areas [Provision C.12.c.ii (1)] in their 2010 Annual Report and results of the surveys [Provision C.12.c.ii.(2)] in their 2011 Annual Report.
- (2) The Permittees shall report sampling and chemical analysis results at pilot locations [Provision C.12.c.ii.(3)] in their 2011 Annual Reports.
- (3) The Permittees shall report on proposed abatement opportunities and activities [Provision C.12.c.ii.(4) and (5)], responsible parties, funding, agency oversight, and schedules in their 2012 Annual Report.
- (4) The Permittees shall report results of abatement program effectiveness and estimates of loads reduced (see C.11.g) in the March 15, 2014 Integrated Monitoring Report.

C.12.d. Conduct Pilot Projects to Evaluate and Enhance Municipal Sediment Removal and Management Practices

- i. Task Description** – The Permittees shall jointly evaluate ways to enhance PCBs load reduction benefits of operation and maintenance activities that remove or manage sediment. The purpose of this task is to implement these management practices at the pilot scale in five drainages during this permit term. The Permittees shall document the knowledge and experience gained through pilot implementation, and this documentation will provide a basis for determining the implementation scope of enhanced sediment removal and management practices in subsequent permit terms. The Permittees shall also quantify and report the amount of PCBs loads removed or avoided resulting from implementation of these measures.
- ii. Implementation Level** – In all pilot program drainages selected as part of Provision C.12.c, the Permittees shall jointly evaluate ways to enhance existing sediment removal and management practices such as municipal street sweeping, curb clearing parking restrictions, inlet cleaning, catch basin cleaning, stream and stormwater conveyance system maintenance, and pump station cleaning via increased effort and/or retrofits. This evaluation shall also include consideration of street flushing and capture, collection, or routing to the sanitary sewer (in coordination and consultation with local sanitary sewer agency) as a potential enhanced management practice. The Permittees shall also jointly evaluate existing information on high-efficiency street sweepers. The goal is to evaluate the cost-effectiveness of high-efficiency street sweeping relative to reducing pollutant loads. The Permittees shall develop recommendations for follow-up studies to be conducted.
- iii. Reporting** – The Permittees shall submit a progress report on the results of these two evaluations in their 2010 Annual Report and the final evaluation results in their 2011 Annual Report.
- iv.** Beginning July 1, 2011, the Permittees shall implement pilot studies for the most potentially effective measure(s) based on the evaluation of Provision C.12.d. ii. throughout the region.
- v. Reporting** – The Permittees shall report effectiveness of enhanced practices pilot implementation in the March 15, 2014 Integrated Monitoring Report, and their plan for implementing enhanced practices in the next permit term.

C.12.e. Conduct Pilot Projects to Evaluate On-Site Stormwater Treatment via Retrofit

- i. Task Description** – The Permittees shall evaluate and quantify the removal of PCBs by on-site treatment systems via retrofit of such systems into existing storm drain systems. The purpose of this task is to implement on-site treatment projects at the pilot scale in ten locations during this permit term. The Permittees shall document the knowledge and experience gained through pilot implementation, and this documentation will provide a basis for determining the implementation scope of on-site treatment retrofits in subsequent permit terms.

- ii. **Implementation Level** – The Permittees, working collaboratively, shall identify at least 10 locations throughout the Permittees’ jurisdictions that present opportunities to install and evaluate⁵¹ on-site treatment systems (e.g., detention basins, bioretention units, sand filters, infiltration basins, treatment wetlands) and shall assess the best treatment options for those locations. Every county (San Mateo, Contra Costa, Alameda, Santa Clara, and Solano) should have at least one location. This assessment shall identify potential locations draining a variety of land uses, discuss technical feasibility, and discuss economical feasibility. The Permittees shall choose pilot study locations primarily on the basis of elevated PCBs concentrations with additional consideration to mercury concentrations.
- iii. On the basis of the Provision C.12.e.ii. report, the Permittees shall select sites to perform pilot studies and shall conduct pilot studies in selected locations. Taken as a group, these 10 pilot study locations should span treatment types and drainage characteristics.
- iv. **Reporting** –
 - (1) In their 2011 Annual Report, the Permittees shall report on candidate locations with types of treatment retrofit for each location. The report shall include assessment of at least 10 locations.
 - (2) In the March 15, 2014 Integrated Monitoring Report, the Permittees shall report status, results, PCBs-removal effectiveness, and lessons learned from the pilot studies and their plan for implementing this type of treatment on an expanded basis throughout the region during the next permit term.

C.12.f. Diversion of Dry Weather and First Flush Flows to POTWs

- i. **Task Description** – The Permittees shall evaluate the reduced loads of PCBs from diversion of dry weather and first flush stormwater flows to sanitary sewers. The knowledge and experience gained through pilot implementation will be used to determine the implementation scope of urban runoff diversion in subsequent permit terms. The Permittees shall document the knowledge and experience gained through pilot implementation, and this documentation will provide a basis for determining the implementation scope of urban runoff diversion projects in subsequent permit terms.
- ii. **Implementation Level** – The Permittees shall implement pilot projects to address the role of pump stations as a source of pollutants of concern (primarily PCBs and secondarily mercury). This work is in addition to Provisions C.2 and C.10 that address dissolved oxygen depletion and trash impacts in receiving waters. The objectives of this provision are: to implement five pilot projects for urban runoff diversion from stormwater pump stations to POTWs; evaluate the reduced loads of mercury and PCBs resulting from the diversion; and gather

⁵¹ The Permittees may evaluate a maximum of two pre-existing treatment systems of the ten total required systems to be evaluated provided that these existing treatment systems are applicable to the intent of this provision.

information to guide the selection of additional diversion projects required in future permits. Collectively, the Permittees shall select 5 stormwater pump stations and 5 alternates by evaluating drainage characteristics and the feasibility of diverting flows to the sanitary sewer.

- (1) The Permittees should work with the local POTW on a watershed, program, or regional level to evaluate feasibility and to establish cost sharing agreements. The feasibility evaluation shall include, but not be limited to, costs, benefits, and impacts on the stormwater and wastewater agencies and the receiving waters relevant to the diversion and treatment of the dry weather and first flush flows.
- (2) From this feasibility evaluation, the Permittees shall select 5 pump stations and 5 alternates for pilot diversion studies. At least one urban runoff diversion pilot project shall be implemented in each of the five counties (San Mateo, Contra Costa, Alameda, Santa Clara, and Solano). The pilot and alternate locations should be located in industrially dominated catchments where elevated PCB concentrations are documented.
- (3) The Permittees shall implement flow diversion to the sanitary sewer at the 5 pilot pump stations. As part of the pilot studies, they shall monitor and measure PCBs load reduction.

iii. Reporting –

- (1) The Permittees shall summarize the results of the feasibility evaluation in their 2010 Annual Report, including:
 - Selection criteria leading to the identification of the 5 candidate and 5 alternate pump station for pilot studies.
 - Time schedules for conducting the pilot studies.
 - A proposed method for distributing PCBs load reductions to participating wastewater and stormwater agencies.
- (2) The Permittees shall report annually on the status of the pilot studies in each subsequent annual report.
- (3) The March 15, 2014 Integrated Monitoring Report shall include:
 - Evaluation of pilot program effectiveness.
 - PCBs loads reduced.
 - Updated feasibility evaluation procedures to guide future diversion project selection.

C.12.g. Monitor Stormwater PCB Pollutant Loads and Loads Reduced

The Permittees shall develop and implement a monitoring program as required in Provision C.8.f to quantify PCBs loads and loads reduced (see C.11.g for details) through the source control, treatment and other management measures implemented as part of the pilot studies of C.12.a through C.12.f.

C.12.h. Fate and Transport Study of PCBs in Urban Runoff

- i. Task Description** – The Permittees shall conduct or cause to be conducted studies aimed at better understanding the fate, transport, and biological uptake of PCBs discharged in urban runoff.
- ii. Implementation Level** – The specific information needs include understanding the in-Bay transport of PCBs discharged in urban runoff, the influence of urban runoff on the patterns of food web PCBs accumulation, and the identification of drainages where urban runoff PCBs are particularly important in food web accumulation.
- iii. Reporting** – The Permittees shall submit in their 2010 Annual Report a workplan describing the specific manner in which these information needs will be accomplished and describing the studies to be performed with a schedule. The Permittees shall report on status of the studies in their 2011 and 2012 Annual Reports. The Permittees shall report in the March 15, 2014 Integrated Monitoring Report the findings and results of the studies completed, planned, or in progress as well as implications of studies on potential control measures to be investigated, piloted or implemented in future permit cycles.

C.12.i. Development of a Risk Reduction Program Implemented throughout the Region

- i. Task Description** – The Permittees shall develop and implement or participate in effective programs to reduce PCBs-related risks to humans and quantify the resulting risk reductions from these activities.
- ii. Implementation Level** – The risk reduction activities shall include investigating ways to address public health impacts of PCBs in San Francisco Bay/Delta fish, including activities that reduce actual and potential exposure of health impacts to those people and communities most likely to be affected by PCBs in San Francisco Bay-caught fish, such as subsistence fishers and their families. Such strategies should include public participation in developing effective programs in order to ensure their effectiveness. The Permittees may include studies needed to establish effective exposure reduction activities and risk communication messages as part of their planning. The risk reduction activities may be performed by a third party if the Permittees wish to provide funding for this purpose. This requirement may be satisfied by a combination of related efforts through the Regional Monitoring Program or other similar collaborative efforts.
- iii. Reporting** – The Permittees shall submit in their 2010 Annual Report the specific manner in which these risk reduction activities will be accomplished and describe the studies to be performed with a schedule. The Permittees shall report on status of the studies in their 2011 and 2012 Annual Reports. The Permittees shall report the findings and results of the studies completed, planned, or in progress as well as the status of other risk reduction actions in the March 15, 2014 Integrated Monitoring Report.

C.13. Copper Controls

The control program for copper is detailed below. The Permittees shall implement the control measures and accomplish the reporting on those control measures according to the provisions below. The purpose of these provisions is to implement the control measures identified in the Basin Plan amendment necessary to support the copper site-specific objectives in San Francisco Bay. The Permittees may comply with any requirement of C.13 Provisions through a collaborative effort.

C.13.a. Manage Waste Generated from Cleaning and Treating of Copper Architectural Features, Including Copper Roofs, during Construction and Post-Construction.

- i. Task Description** – The Permittees shall ensure that local ordinance authority is established to prohibit the discharge of wastewater to storm drains generated from the installation, cleaning, treating, and washing of the surface of copper architectural features, including copper roofs to storm drains.
- ii. Implementation Level**
 - (1) The Permittees shall develop BMPs on how to manage the waste during and post-construction.
 - (2) The Permittees shall require use of appropriate BMPs when issuing building permits.
 - (3) The Permittees shall educate installers and operators on appropriate BMPs.
 - (4) The Permittees shall enforce against noncompliance.
- iii. Reporting**
 - (1) The Permittees shall certify adequate legal authority in their 2011 Annual Report or otherwise provide justification for schedule not to exceed one year to comply.
 - (2) The Permittees shall report annually, starting with their 2012 Annual Report, on training, permitting and enforcement activities.
 - (3) In their 2013 Annual Report, the Permittees shall evaluate the effectiveness of these measures, including BMP implementation and propose any additional measures to address this source.

C.13.b. Manage Discharges from Pools, Spas, and Fountains that Contain Copper-Based Chemicals

- i. Task Description** – By adopting local ordinances, the Permittees shall prohibit discharges to storm drains from pools, spas, and fountains that contain copper-based chemicals.
- ii. Implementation Level** – The Permittees shall either: 1) require installation of a sanitary sewer discharge connection for pools, spas, and fountains, including

connection for filter backwash, with a proper permit from the POTWs; or 2) require diversion of discharge for use in landscaping or irrigation.

- iii. **Reporting** – The Permittees shall certify adequate legal authority in their 2011 Annual Report or otherwise provide justification for schedule not to exceed one year to comply.

C.13.c. Vehicle Brake Pads

- i. **Task Description** – The Permittees shall engage in efforts to reduce the copper discharged from automobile brake pads to surface waters via urban runoff.
- ii. **Implementation Level** – The Permittees shall participate in the Brake Pad Partnership (BPP) process to develop California legislation phasing out copper from certain automobile brake pads sold in California.
- iii. **Reporting** – The Permittees shall report on legislation development and implementation status in Annual Reports during the permit term. In their 2013 Annual Report, the Permittees shall assess status of copper water quality issues associated with automobile brake pads and recommend brake pad-related actions for inclusion in subsequent permits if needed.

C.13.d. Industrial Sources

- i. **Task Description** – The Permittees shall ensure industrial facilities do not discharge elevated levels of copper to storm drains by ensuring, through industrial facility inspections, that proper BMPs are in place.
- ii. **Implementation Level** –
 - (1) As part of industrial site controls required by Provision C.4, the Permittees shall identify facilities likely to use copper or have sources of copper (e.g., plating facilities, metal finishers, auto dismantlers) and include them in their inspection program plans.
 - (2) The Permittees shall educate industrial inspectors on industrial facilities likely to use copper or have sources of copper and proper BMPs for them.
 - (3) As part of the industrial inspection, inspectors shall ensure that proper BMPs are in place at such facilities to minimize discharge of copper to storm drains, including consideration of roof runoff that might accumulate copper deposits from ventilation systems on-site.
- iii. **Reporting**

The Permittees shall highlight copper reduction results in the industrial inspection component in the C.13 portion of each Annual Report beginning September 2010.

C.13.e. Studies to Reduce Copper Pollutant Impact Uncertainties

- i. Task Description** – The Permittees shall conduct or cause to be conducted technical studies to investigate possible copper sediment toxicity and technical studies to investigate sub-lethal effects on salmonids.
- ii. Implementation Level** – Technical uncertainties regarding copper effects in the Bay are described in the Basin Plan’s implementation program for copper site-specific objectives. These uncertainties include toxicity to Bay benthic organisms possibly caused by high copper concentrations as well as possible impacts to the olfactory system of salmonids. The Permittees shall ensure that these studies are supported and conducted. Similar requirements are included in NPDES permits for wastewater discharges. The Permittees shall submit in their 2010 Annual Report the specific manner in which these information needs will be accomplished and describe the studies to be performed with a schedule. The Permittees shall report the findings and results of the studies completed, planned, or in progress in their 2012 Annual Report.

C.14. Polybrominated Diphenyl Ethers (PBDE), Legacy Pesticides and Selenium

The control program for PBDEs, legacy pesticides, and selenium is detailed below. The Permittees shall perform the control measures and accomplish the reporting on those control measures according to the provisions below. The purpose of these provisions is to gather concentration and loading information on a number of pollutants of concern (e.g., PBDEs, DDT, dieldrin, chlordane, selenium) for which TMDLs are planned or are in the early stages of development. The Permittees may comply with any requirement of C.14 Provisions through a collaborative effort.

C.14.a. Control Program for PBDEs, Legacy Pesticides, and Selenium.

- i. Task Description** – To determine if urban runoff is a conveyance mechanism associated with the possible impairment of San Francisco Bay for PBDEs, legacy pesticides (such as DDT, dieldrin, and chlordane), and selenium, the Permittees shall work with the other municipal stormwater management agencies in the Bay Region to implement a plan (PBDEs/Legacy Pesticides/Selenium Plans) to identify, assess, and manage controllable sources of PBDEs, legacy pesticides, and selenium found in urban runoff, if any. The Water Board recognizes that these three pollutants are distinct in terms of origin and transport, but they have been grouped into a single permit provision because the requirements are identical. The Water Board anticipates that some of the control measures that are developed for PCBs consistent with aforementioned efforts warrant consideration for the control of PBDEs and possibly legacy pesticides.
- ii. Implementation Level** – The PBDEs/Legacy Pesticides/Selenium Plan shall include actions to do the following:

Characterize the representative distribution of PBDEs, legacy pesticides, and selenium in the urban areas of the Bay Region covered by this permit to determine:

 - (1) If PBDEs, legacy pesticides, and selenium are present in urban runoff;
 - (2) If PBDEs, legacy pesticides, or selenium are distributed relatively uniformly in urban areas; and
 - (3) Whether storm drains or other surface drainage pathways are sources of PBDEs, legacy pesticides, or selenium in themselves, or whether there are specific locations within urban watersheds where prior or current uses result in land sources contributing to discharges of PBDEs, legacy pesticides, or selenium to San Francisco Bay via urban runoff conveyance systems.
- iii.** Report on progress in 2010 and 2011 Annual Reports. Submit in the 2012 Annual Report a report with the results of the characterization of PBDEs, legacy pesticides, and selenium in urban areas throughout the Bay Region.

- iv.** Provide information to allow calculation of PBDEs, legacy pesticides, and selenium loads to San Francisco Bay from urban runoff conveyance systems.
- v.** Submit in the 2013 Annual Report a report with the information required to compute such loads to San Francisco Bay of PBDEs, legacy pesticides, and selenium from urban runoff conveyance systems throughout the Bay.
- vi.** Identify control measures and/or management practices to eliminate or reduce discharges of PBDEs, legacy pesticides, or selenium conveyed by urban runoff conveyance systems.
- vii.** Submit in the 2013 Annual Report a report identifying such control measures/management practices.

C.15. Exempted and Conditionally Exempted Discharges

The objective of this provision is to exempt unpolluted non-stormwater discharges from Discharge Prohibition A.1 and to conditionally exempt non-stormwater discharges that are potential sources of pollutants. In order for non-stormwater discharges to be conditionally exempted from Discharge Prohibition A.1, the Permittees must identify appropriate BMPs, monitor the non-stormwater discharges where necessary, and ensure implementation of effective control measures – as listed below – to eliminate adverse impacts to waters of the State consistent with the discharge prohibitions of the Order.

C.15.a. Exempted Non-Stormwater Discharges (Exempted Discharges):

- i. **Discharge Type** – In carrying out Discharge Prohibition A.1, the following unpolluted discharges are exempted from prohibition of non-stormwater discharges:
 - (1) Flows from riparian habitats or wetlands;
 - (2) Diverted stream flows;
 - (3) Flows from natural springs;
 - (4) Rising ground waters;
 - (5) Uncontaminated and unpolluted groundwater infiltration;
 - (6) Single family homes' pumped groundwater, foundation drains, and water from crawl space pumps and footing drains;
 - (7) Pumped groundwater from drinking water aquifers; and
 - (8) NPDES permitted discharges (individual or general permits).
- ii. **Implementation Level** – The non-stormwater discharges listed in Provision C.15.a.i above are exempted unless they are identified by the Permittees or the Executive Officer as sources of pollutants to receiving waters. If any of the above categories of discharges, or sources of such discharges, are identified as sources of pollutants to receiving waters, such categories or sources shall be addressed as conditionally exempted discharges in accordance with Provision C.15.b below.

C.15.b. Conditionally Exempted Non-Stormwater Discharges:

The following non-stormwater discharges are also exempt from Discharge Prohibition A.1 if they are either identified by the Permittees or the Executive Officer as not being sources of pollutants to receiving waters, or if appropriate control measures to eliminate adverse impacts of such sources are developed and implemented in accordance with the tasks and implementation levels of each category of Provision C.15.b.i-viii below.

- i. **Discharge Type** – Pumped Groundwater, Foundation Drains, and Water from Crawl Space Pumps and Footing Drains

- (1) **Pumped Groundwater from Non Drinking Water Aquifers** – Groundwater pumped from monitoring wells, used for groundwater basin management, which are owned and/or operated by the Permittees who pump groundwater as drinking water. These aquifers tend to be shallower, when compared to drinking water aquifers.
- (a) **Implementation Level** – Twice a year (once during the wet season and once during the dry season), representative samples shall be taken from each aquifer that potentially will discharge or has discharged into a storm drain. Samples collected and analyzed for compliance in accordance with self-monitoring requirements of other NPDES permits or sample data collected for drinking water regulatory compliance may be submitted to comply with this requirement as long as they meet the following criteria:
- (i) The water samples shall meet water quality standards consistent with the existing effluent limitations in the Water Board's NPDES General Permits, such as NPDES Nos. CAG912002 and CAG912003 for Discharge or Reuse of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by fuel and VOCs, respectively, and NPDES No. CAG912004 for discharges of low-level, incidental, and potentially contaminated groundwater.
 - (ii) The water samples shall be analyzed using approved USEPA Methods (e.g., (a) USEPA Method 160.2 for total suspended solids; (b) USEPA Method 8015 Modified for total petroleum hydrocarbons; (c) USEPA Method 8260B and 8270C or equivalent for volatile and semi-volatile organic compounds; and (d) USEPA Method 3005 for metals.
 - (iii) The water samples shall be analyzed for pH and turbidity.
 - (iv) If a Permittee is unable to comply with the above criteria, the Permittee shall notify the Water Board upon becoming aware of the compliance issue.
- (b) **Required BMPs** – When uncontaminated (meeting the criteria in C.15.b.i.(1)(a)(i)) groundwater is discharged from these monitoring wells, the following shall be implemented:
- (i) Discharges shall be properly controlled and maintained to prevent erosion at the discharge point and at a rate that avoids scouring of banks and excess sedimentation in the receiving waterbody.
 - (ii) Appropriate BMPs shall be implemented to remove total suspended solids and silt to allowable discharge levels. Appropriate BMPs may include filtration, settling, coagulant application with no residual coagulant discharge, minor odor or color removal with activated carbon, small scale peroxide addition, or other minor treatment.

- (iii) Turbidity of the discharged groundwater shall be maintained below 50 NTUs for discharges to dry creeks, 110 percent of the ambient stream turbidity for a flowing stream with turbidities greater than 50 NTU, or 5 NTU above ambient turbidity for flowing streams with turbidities less than or equal to 50 NTU.
 - (iv) pH of the discharged groundwater shall be maintained within the range of 6.5 to 8.5.
 - (c) **Reporting** – The Permittees shall maintain records of these discharges, BMPs implemented, and any monitoring data collected.
- (2) **Pumped⁵² Groundwater, Foundation Drains, and Water from Crawl Space Pumps and Footing Drains**
- (a) Proposed new discharges of uncontaminated groundwater at flows of 10,000 gallons/day or more and all new discharges of potentially contaminated groundwater shall be reported to the Water Board so that they can be subject to NPDES permitting requirements.
 - (b) Proposed new discharges of uncontaminated groundwater at flows of less than 10,000 gallons/day shall be encouraged to discharge to a landscaped area or bioretention unit that is large enough to accommodate the volume.
 - (c) If the discharge options in C.15.b.i.(2)(b) above are not feasible and these discharges must enter a storm drain, sampling shall be done to verify that the discharge is uncontaminated.
 - (i) The discharge shall meet water quality standards consistent with the existing effluent limitations in the Water Board's NPDES General Permits, such as NPDES Nos. CAG912002 and CAG912003 for Discharge or Reuse of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by fuel and VOCs, respectively, and NPDES No. CAG912004 for discharges of low-level, incidental, and potentially contaminated groundwater.
 - (ii) The Permittees shall require that water samples from these discharge types be analyzed using approved USEPA Methods (e.g., (a) USEPA Method 160.2 for total suspended solids; (b) USEPA Method 8015 Modified for total petroleum hydrocarbons; (c) USEPA Method 8260B and 8270C or equivalent for volatile and semi-volatile organic compounds; and (d) USEPA Method 3005 for metals.
 - (d) **Required BMPs** – When the discharge has been verified as uncontaminated per sampling completed in C.15.b.i.(2)(c) above, the Permittees shall require the following during discharge:
 - (i) Proper control and maintain to prevent erosion at the discharge point and at a rate that avoids scouring of banks and excess sedimentation in the receiving waterbody.

⁵² Pumped groundwater not exempted in C.15.a or conditionally exempted in C.15.b.i.(1).

- (ii) Appropriate BMPs to render pumped groundwater free of pollutants and therefore exempted from prohibition may include the following: filtration, settling, coagulant application with no residual coagulant discharge, minor odor or color removal with activated carbon, small scale peroxide addition, or other minor treatment.
- (iii) Testing of water samples for turbidity and pH on the first two consecutive days of dewatering.
- (iv) Turbidity of discharged groundwater shall be maintained below 50 NTU for discharges to dry creeks, 110 percent of the ambient stream turbidity for a flowing stream with turbidities greater than 50 NTU, or 5 NTU above ambient turbidity for a flowing stream with turbidities less than or equal to 50 NTU.
- (v) pH of discharged water shall be maintained within the range of 6.5 to 8.5.
- (e) If a Permittee determines that a discharger or a project proponent is unable to comply with the above criteria, the discharger shall be directed to obtain approval or permits directly from the Water Board.
- (f) **Reporting** – The Permittees shall maintain records of these discharges, BMPs implemented, and any monitoring data collected.

ii. Discharge Type – Air Conditioning Condensate

Required BMPs – Condensate from air conditioning units shall be directed to landscaped areas or the ground. Discharge to a storm drain system may be allowed if discharge to landscaped areas or the ground is not feasible.

iii. Discharge Types – Planned,⁵³ Unplanned,⁵⁴ and Emergency Discharges of the Potable Water System

(1) **Planned Discharges** – Planned discharges are routine operation and maintenance activities in the potable water distribution system that can be scheduled in advance, such as disinfecting water mains, testing fire hydrants, storage tank maintenance, cleaning and lining pipe sections, routine distribution system flushing, reservoir dewatering, and water main dewatering activities. The following requirements only apply to those Permittees that are water purveyors and pertain to their planned discharges of potable water to their storm drain systems.

- (a) **Required BMPs**⁵⁵ – The Permittees shall implement appropriate BMPs for dechlorination, and erosion and sediment controls for all planned potable water discharges.

⁵³ Planned discharges typically result from required routine operation and maintenance activities that can be scheduled in advance. Planned discharges are easier to control than unplanned discharges, and the BMPs are significantly easier to plan and implement.

⁵⁴ Unplanned discharges are non-routine, the result of accidents or incidents that cannot be scheduled or planned for in advance.

(b) Notification Requirements

- (i) The Permittees shall notify the Water Board staff at least one week in advance for planned discharges with a flow rate of 250,000 gallons per day or more, or a total volume of 500,000 gallons or more. The Permittees shall also notify other interested parties who may be impacted by planned discharges, such as flood control agencies, downstream jurisdictions, and non-governmental organizations such as creek groups, before discharge. The notification shall include the following information, but is not limited to: (1) project name; (2) type of discharges; (3) receiving waterbody(ies); (4) date of discharge; (5) time of discharge (in military time); (6) estimated volume (gallons); and (7) estimated flow rate (gallons per day); and (8) monitoring plan of the discharges and receiving water. If receiving water monitoring is infeasible or is not practicable, justification shall be provided.

(c) Monitoring and Reporting Requirements

- (i) The Permittees shall monitor planned discharges for pH, chlorine residual, and turbidity.
- (ii) The following discharge benchmarks shall be used to evaluate the effectiveness of BMPs for all planned discharges:
- Chlorine residual 0.05 mg/L using the field test (Standard Methods 4500-Cl F and F) or equivalent
 - pH ranges between 6.5 and 8.5
 - Turbidity of 50 NTU post-BMPs or limit increase in turbidity above background level as follows:

<u>Receiving Water Background</u>	<u>Incremental Increase</u>
Dry Creek	50 NTU
< 50 NTU	5 NTU
50–100 NTU	10 NTU
> 100 NTU	10% of background

- (iii) The Permittees shall submit the following information with the Annual Report in tabular form for all planned discharges. Reporting content shall include, but is not limited to the following parameters: (1) project name; (2) type of discharge; (3) receiving waterbody(ies); (4) date of discharge; (5) duration of discharge (in military time); (6) estimated volume (gallons); (7) estimated flow rate (gallons per day); (8) chlorine residual (mg/L); (9) pH; (10) turbidity (NTU) for receiving water where feasible and point of discharge, and (11) description of implemented BMPs or corrective actions.

⁵⁵ Reference for BMPs, monitoring methods: *Guidelines for the Development of Your BMP Manual for Drinking Water System Releases*. Developed by the California-Nevada Sections of the American Water Works Association (CA-NV AWWA), Environmental Compliance Committee (ECC) 2005.

- (2) **Unplanned Discharges** – Unplanned discharges are non-routine activities such as water line breaks, leaks, overflows, fire hydrant shearing, and emergency flushing. The following requirements only apply to those Permittees that are water purveyors and pertain to their unplanned discharges of potable water to their storm drain systems.
- (a) **Required BMPs** – The Permittees shall implement appropriate BMPs for dechlorination and erosion and sediment control for all unplanned discharges upon containing the discharge and attaining safety of the discharge site.
- (b) **Administrative BMPs** – In some instances, the Permittees shall implement Administrative BMPs, such as source control measures, managerial practices, operations and maintenance procedures, or other measures to reduce or prevent potential pollutants from being discharged during unplanned discharges upon containing the discharge and attaining safety of the discharge site.
- (c) **Notification Requirements**
- (i) The Permittees shall report to the State Office of Emergency Services as soon as possible, but no later than two hours after becoming aware of (1) any aquatic impacts (e.g., fish kill) as a result of the unplanned discharges, or (2) when the discharge might endanger or compromise public health and safety.
- (ii) The Permittees shall report to Water Board staff, by telephone or email as soon as possible, but no later than 24 hours after becoming aware of any unplanned discharges, where the total chlorine residual is greater than 0.05 mg/L and the total volume is approximately 50,000 gallons or more.
- Within five working days after the 24-hour telephone or email report, the Permittees shall submit a report documenting the discharge and corrective actions taken to Water Board staff and other interested parties.
- (d) **Monitoring and Reporting Requirements**
- (i) The Permittees shall monitor at least 10% of their unplanned discharges for pH and chlorine residual, and visually assess each discharge for turbidity immediately downstream of implemented BMPs to demonstrate their effectiveness. After the implementation of appropriate BMPs, the discharge pH levels outside the discharge ranges (below 6.5 and above 8.5), chlorine residual above 0.05 mg/l, or moderate and high turbidity shall trigger BMP improvement. If the Permittees monitor more than 10% of the unplanned discharges, all monitoring results shall be included in the Annual Report.
- (ii) The Permittees shall submit the following information with the Annual Report in tabular form for all unplanned discharges. The reporting format and content shall be as described in Provision C.15.b.ii.(1)(c)(iii) of the Planned Discharges above. In

addition, these reports shall also state the time of discharge discovery, notification time, inspector arrival time, and responding crew arrival time.

- (iii) After 18 months of consecutive data gathering, a Permittee may propose, to the Executive Officer, a reduced monitoring plan targeting specific “high-risk” or “environmentally sensitive” areas (i.e., areas that are prone to erosion and excess sedimentation at high flows, support rare or endangered species, or provide aquatic habitat with proven effective BMPs). Until the Executive Officer approves the reduced monitoring plan, the Permittee shall continue the monitoring plan prescribed in C.15.b.iii.(2)(d)(i).

- (3) **Emergency Discharges** – Emergency discharges are the result of firefighting, unauthorized hydrant openings, natural or man-made disasters (e.g., earthquakes, floods, wildfires, accidents, terrorist actions).

Required BMPs

- (a) The Permittees shall implement or require fire fighting personnel to implement BMPs for emergency discharges. However, the BMPs should not interfere with immediate emergency response operations or impact public health and safety. BMPs may include, but are not limited to, the plugging of the storm drain collection system for temporary storage, the proper disposal of water according to jurisdictional requirements, and the use of foam where there may be toxic substances on the property the fire is located.
- (b) During emergency situations, priority of efforts shall be directed toward life, property, and the environment (in descending order). The Permittees or fire fighting personnel shall control the pollution threat from their activities to the extent that time and resources allow.
- (c) **Reporting Requirements** – Reporting requirements will be determined by Water Board staff on a case-by-case basis, such as for fire incidents at chemical plants.

iv. Discharge Type – Individual Residential Car Washing

Required BMPs

- (1) The Permittees shall discourage through outreach efforts individual residential car washing within their jurisdictional areas that discharge directly into their MS4s.
- (2) The Permittees shall encourage individuals to direct car wash waters to landscaped areas, use as little detergent as necessary, wash cars at commercial car wash facilities, etc.

v. Discharge Type – Swimming Pool, Hot Tub, Spa, and Fountain Water Discharges

(1) Required BMPs

- (a) The Permittees shall prohibit discharge of water that contains chlorine residual, copper algaecide, filter backwash or other pollutants to storm drains or to waterbodies. Such polluted discharges from pools, hot tubs, spas, and fountains shall be directed to the sanitary sewer (with the local sanitary sewer agency's approval) or to landscaped areas that can accommodate the volume.
- (b) Discharges from swimming pools, hot tubs, spas and fountains shall be allowed into storm drain collection systems only if there are no other feasible disposal alternatives (e.g., disposal to sanitary sewer or landscaped areas) and if the discharge is properly dechlorinated to non-detectable levels of chlorine consistent with water quality standards.
- (c) The Permittees shall require that new or rebuilt swimming pools, hot tubs, spas and fountains within their jurisdictions have a connection⁵⁶ to the sanitary sewer to facilitate draining events. The Permittees shall coordinate with local sanitary sewer agencies to determine the standards and requirements necessary for the installation of a sanitary sewer discharge location to allow draining events for pools, hot tubs, spas, and fountains to occur with the proper permits from the local sanitary sewer agency.
- (d) The Permittees shall improve their public outreach and educational efforts and ensure implementation of the required BMPs and compliance in commercial, municipal, and residential facilities.
- (e) The Permittees shall implement the Illicit Discharge Enforcement Response Plan from C.5.b for polluted (contains chlorine, copper algaecide, filter backwash, or other pollutants) swimming pool, hot tub, spa, or fountain waters that get discharged into the storm drain.

- (2) **Reporting** – The Permittees shall keep records of the authorized major discharges of dechlorinated pool, hot tubs, spa and fountain water to the storm drain, including BMPs employed; such records shall be available for inspection by the Water Board.

vi. Discharge Type – Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering

- (1) **Required BMPs** – The Permittees shall promote measures that minimize runoff and pollutant loading from excess irrigation via the following:

- (a) Promoting and/or working with potable water purveyors to promote conservation programs that minimize discharges from lawn watering and landscape irrigation practices;

⁵⁶ This connection could be a drain in the pool to the sanitary sewer or a sanitary sewer clean out located close enough to the pool so that a hose can readily direct the pool discharge into the sanitary sewer clean out.

- (b) Promoting outreach messages regarding the use of less toxic options for pest control and landscape management;
 - (c) Promoting and/or working with potable water purveyors to promote the use of drought tolerant, native vegetation to minimize landscape irrigation demands;
 - (d) Promoting and/or working with potable water purveyors to promote outreach messages that encourage appropriate applications of water needed for irrigation and other watering practices; and,
 - (e) Implementing the Illicit Discharge Enforcement Response Plan from C.5.b, as necessary, for ongoing, large-volume landscape irrigation runoff to their MS4s.
 - (2) **Reporting** – The Permittees shall provide implementation summaries in their Annual Report.
- vii. **Additional Discharge Types** –The Permittees shall identify and describe additional types and categories of discharges not yet listed in Provision C.15.b that they propose to conditionally exempt from Prohibition A.1 in periodic submissions to the Executive Officer. For each such category, the Permittees shall identify and describe, as necessary and appropriate to the category, either documentation that the discharges are not sources of pollutants to receiving waters or circumstances in which they are not found to be sources of pollutants to receiving waters. Otherwise, the Permittees shall describe control measures to eliminate adverse impacts of such sources, procedures and performance standards for their implementation, procedures for notifying the Water Board of these discharges, and procedures for monitoring and record management.
- viii. **Permit Authorization for Exempted Non-Stormwater Discharges**
 - (1) Discharges of non-stormwater from sources owned or operated by the Permittees are authorized and permitted by this Permit, if they are in accordance with the conditions of this provision.
 - (2) The Water Board may require dischargers of non-stormwater, other than the Permittees, to apply for and obtain coverage under an NPDES permit and to comply with the control measures pursuant to Provision C.15.b. Non-stormwater discharges that are in compliance with such control measures may be accepted by a Permittee and are not subject to Prohibition A.1.
 - (3) The Permittees may propose, as part of their annual updates consistent with the requirements of Provision C.15.b of this Permit, additional categories of non-stormwater discharges with BMPs, to be included in the exemption to Prohibition A.1. Such proposals may be subject to approval by the Executive Officer as a minor modification of the Permit.

C.16. Annual Reports

- C.16.a.** The Permittees shall submit Annual Reports electronically and in paper copy upon request by September 15 of each year. Each Annual Report shall report on the previous fiscal year beginning July 1 and ending June 30. The annual reporting requirements are set forth in Provisions C.1 – C.15. The Permittees shall retain documentation as necessary to support their Annual Report. The Permittees shall make this supporting information available upon request within a timely manner, generally no more than ten business days unless otherwise agreed to by the Executive Officer.
- C.16.b.** The Permittees shall collaboratively develop a common annual reporting format for acceptance by the Executive Officer by April 1, 2010. The resulting Annual Report Form, once approved, shall be used by all Permittees. The Annual Report Form may be changed by April 1 of each year for the following annual report, to more accurately reflect the reporting requirements of Provisions C.1 – C.15, with the agreement of the Permittees and by the approval of the Executive Officer.
- C.16.c.** The Permittees shall certify in each Annual Report that they are in compliance with all requirements of the Order. If a Permittee is unable to certify compliance with a requirement, it must submit in the Annual Report the reason for failure to comply, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance.

C.17. Modifications to this Order

This Order may be modified, or alternatively, revoked or reissued, before the expiration date as follows:

- C.17.a.** To address significant changed conditions identified in the technical or Annual Reports required by the Water Board, or through other means or communication, that were unknown at the time of the issuance of this Order;
- C.17.b.** To incorporate applicable requirements of statewide water quality control plans adopted by the State Board or amendments to the Basin Plan approved by the State Board; or
- C.17.c.** To comply with any applicable requirements, guidelines, or regulations issued or approved under section 402(p) of the CWA, if the requirement, guideline, or regulation so issued or approved contains different conditions or additional requirements not provided for in this Order. The Order as modified or reissued under this paragraph shall also contain any other requirements of the CWA then applicable.

C.18. Standard Provisions

Each Permittee shall comply with all parts of the Standard Provisions contained in Attachment K of this Order.

C.19. Expiration Date

This Order expires on November 30, 2014, five years from the effective date of this Order. The Permittees must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date as application for reissuance of waste discharge requirements.

C.20. Rescission of Old Orders

Order Nos. 99-058, 99-059, 01-024, R2-2003-0021, and R2-2003-0034 are hereby rescinded on the effective date of this Order, which shall be December 1, 2009, provided that the Regional Administrator of USEPA, Region IX, does not object.

C.21. Effective Date

The Effective Date of this Order and Permit shall be December 1, 2009, provided that the Regional Administrator of USEPA, Region IX, does not object.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 14, 2009 and revised on November 28, 2011 by Order No. R2-2011-0083.

Bruce H. Wolfe
Executive Officer

Appendix I: Municipal Regional Stormwater Permit Fact Sheet
Attachment A: Provision C.3.b. Sample Reporting Table
Attachment B: Provision C.3.g. Alameda Permittees Hydromodification Requirements
Attachment C: Provision C.3.g. Contra Costa Permittees Hydromodification Requirements
Attachment D: Provision C.3.g. Fairfield-Suisun Permittees Hydromodification Requirements
Attachment E: Provision C.3.g. San Mateo Permittees Hydromodification Requirements
Attachment F: Provision C.3.g. Santa Clara Permittees Hydromodification Requirements
Attachment G: Provision C.3.h. Sample Reporting Table
Attachment H: Provision C.8. Status & Long-Term Monitoring Follow-up Analysis and Actions
Attachment I: Provision C.8. Standard Monitoring Provisions

- Attachment J: Provision C.10. Minimum Trash Capture Areas and Minimum Number of Trash Hot Spots
- Attachment K: Standard NPDES Stormwater Permit Provisions
- Attachment L: Provision C.3.c.i.(1)(b)(vi) Specification of Soils for Biotreatment or Bioretention Facilities
- Attachment M: Provision C.3.g. Revised HM Map for Santa Clara Permittees

ACRONYMS & ABBREVIATIONS

ACCWP	Alameda Countywide Clean Water Program
BAHM	Bay Area Hydrology Model
Basin Plan	Water Quality Control Plan for the San Francisco Bay Basin
BASMAA	Bay Area Stormwater Management Agencies Association
BMPs	Best Management Practices
CASQA	California Stormwater Quality Association
CCC	California Coastal Commission
CCCWP	Contra Costa Clean Water Program
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CSBP	California Stream Bioassessment Procedures
CWA	Federal Clean Water Act
CWC	California Water Code
DCIA	Directly Connected Impervious Area
ERP	Enforcement Response Plan
FR	Federal Register
GIS	Geographic information System
HBANC	Homebuilders Association of Northern California
HM	Hydromodification Management
HMP	Hydromodification Management Plan
IC/ID	Illicit Connections and Illicit Discharges
IPM	Integrated Pest Management
LID	Low Impact Development
MEP	Maximum Extent Practicable
MRP	Municipal Stormwater Regional Permit
MS4	Municipal Separate Storm Sewer System
MTC	Metropolitan Transportation Commission

NAFSMA	National Association of Flood & Stormwater Management Agencies
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRDC	Natural Resources Defense Council
O&M	Operation and Maintenance
PBDE	Polybrominated Diphenyl Ether
POTW	Publicly Owned Treatment Works
RCRA	Resource Conservation and Recovery Act
RMP	Regional Monitoring Program
ROWD	Report of Waste Discharge
RTA	Rapid Trash Assessment
SARA	Superfund Amendments and Reauthorization Act
SCURTA	Santa Clara Urban Rapid Trash Assessment
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SFRWQCB	San Francisco Bay Regional Water Quality Control Board
SIC	Standard Industrial Classification
SMWPPP	San Mateo Countywide Water Pollution Prevention Program
SOP	Standard Operating Procedure
SWAMP	Surface Water Ambient Monitoring Program
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TIE	Toxicity Identification Evaluation
TMDLs	Total Maximum Daily Loads
TSCA	Toxic Substances Control Act
USEPA	United States Environmental Protection Agency
Water Board	San Francisco Bay Regional Water Quality Control Board
WLAs	Wasteload Allocations

GLOSSARY

Arterial Roads	Freeways, multilane highways, and other important roadways that supplement the Interstate System. Arterial roads connect, as directly as practicable, principal urbanized areas, cities, and industrial centers.
Beneficial Uses	The uses of water of the state protected against degradation, such as domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation and preservation of fish and wildlife, and other aquatic resources or preserves.
Collector Roads	Major and minor roads that connect local roads with arterial roads. Collector roads provide less mobility than arterial roads at lower speeds and for shorter distances.
Commercial Development	Development or redevelopment to be used for commercial purposes, such as office buildings, retail or wholesale facilities, restaurants, shopping centers, hotels, and warehouses.
Construction Site	Any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, paving, disturbances to ground such as stockpiling, and excavation. Construction sites are all sites with disturbed or graded land area not protected by vegetation, or pavement, that are subject to a building or grading permit.
Conditionally Exempted Non-Stormwater Discharge	Non-stormwater discharges that are prohibited by A.1. of this permit, unless such discharges are authorized by a separate NPDES permit or are not in violation of water quality standards because appropriate BMPs have been implemented to reduce pollutants to the maximum extent practicable, consistent with Provision C.15.
Discharger	Any responsible party or site owner or operator within the Permittees' jurisdiction whose site discharges stormwater runoff, or a non-stormwater discharge
Detached Single-family Home Project	The building of one single new house or the addition and/or replacement of impervious surface associated with one single existing house, which is not part of a larger plan of development.
Development	Construction, rehabilitation, redevelopment, or reconstruction of any public or private residential project (whether single-family, multi-unit, or planned unit development); or industrial, commercial, retail or other nonresidential project, including public agency projects.
Estate Residential Development	Development zoned for a minimum 1 acre lot size
Emerging Pollutants	Pollutants in water that either: (1) May not have been thoroughly studied to date but are suspected by the scientific community to be a source of impairment of beneficial uses and/or present a health risk; or (2) Are not yet part of a monitoring program.
Erosion	The diminishing or wearing away of land due to wind, or water. Often the eroded debris (silt or sediment) becomes a pollutant via stormwater runoff. Erosion occurs

	naturally, but can be intensified by land disturbing and grading activities such as farming, development, road building, and timber harvesting.
Full Trash Capture Device	Full trash capture systems are defined as “any device or series of devices that traps all particles retained by a 5mm mesh screen and has a design treatment capacity of not less than the peak flow rate resulting from a one-year, one-hour, storm in the tributary drainage catchment area.” Trash collection booms and sea curtains do not meet this definition, but are effective for removal of floating trash if properly maintained. Because these devices do not meet the Full Trash Capture Device definition, only ¼ of the catchment area treated by these measures is credited toward meeting the trash management area requirement of C.10.a.
General Permits	Waste Discharge Requirements or NPDES Permits containing requirements that are applicable to a class or category of dischargers. The State of California has general stormwater permits for construction sites that disturb soil of 1 acre or more; industrial facilities; Phase II smaller municipalities (including nontraditional Small MS4s, which are governmental facilities, such as military bases, public campuses, and prison and hospital complexes); and small linear underground/overhead projects disturbing at least 1 acre, but less than 5 acres (including trenching and staging areas).
Grading	The cutting and/or filling of the land surface to a slope or elevation.
Hydrologic source control measures	Site design techniques that minimize and/or slow the rate of stormwater runoff from the site.
Hydromodification	The modification of a stream’s hydrograph, caused in general by increases in flows and durations that result when land is developed (e.g., made more impervious). The effects of hydromodification include, but are not limited to, increased bed and bank erosion, loss of habitat, increased sediment transport and deposition, and increased flooding.
Illicit Discharge	Any discharge to a municipal separate storm sewer (storm drain) system (MS4) that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term <i>illicit discharge</i> includes all non-stormwater discharges not composed entirely of stormwater and discharges that are identified under Section A. (Discharge Prohibitions) of this Permit. The term illicit discharge does not include discharges that are regulated by an NPDES permit (other than the NPDES permit for discharges from the MS4) or authorized by the Regional Water Board Executive Officer.
Impervious Surface	A surface covering or pavement of a developed parcel of land that prevents the land’s natural ability to absorb and infiltrate rainfall/stormwater. Impervious surfaces include, but are not limited to, roof tops; walkways; patios; driveways; parking lots; storage areas; impervious concrete and asphalt; and any other continuous watertight pavement or covering. Landscaped soil and pervious pavement, including pavers with pervious openings and seams, underlain with pervious soil or pervious storage material, such as a gravel layer sufficient to hold at least the C.3.d volume of rainfall runoff are not impervious surfaces. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces for purposes of determining whether a project is a Regulated Project under

	Provisions C.3.b. and C.3.g. Open, uncovered retention/detention facilities shall be considered impervious surfaces for purposes of runoff modeling and meeting the Hydromodification Standard.
Industrial Development	Development or redevelopment of property to be used for industrial purposes, such as factories; manufacturing buildings; and research and development parks.
Infill Site	A site in an urbanized area where the immediately adjacent parcels are developed with one or more qualified urban uses or at least 75% of the perimeter of the site adjoins parcels that are developed with qualified urban uses and the remaining 25% of the site adjoins parcels that have previously been developed for qualified urban uses and no parcel within the site has been created within the past 10 years.
Infiltration Device	Any structure that is deeper than wide and designed to infiltrate stormwater into the subsurface, and, as designed, bypass the natural groundwater protection afforded by surface soil. These devices include dry wells, injection wells, and infiltration trenches (includes French drains).
Joint Stormwater Treatment Facility	A stormwater treatment facility built to treat the combined runoff from two or more Regulated Projects located adjacent to each other,
Local Roads	Roads that provide limited mobility and are the primary access to residential areas, businesses, farms, and other local areas. Local roads offer the lowest level of mobility and usually contain no bus routes. Service to through traffic movement usually is deliberately discouraged in local roads.
Maximum Extent Practicable (MEP)	A standard for implementation of stormwater management actions to reduce pollutants in stormwater. Clean Water Act (CWA) 402(p)(3)(B)(iii) requires that municipal stormwater permits “shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.” Also see State Board Order WQ 2000-11.
Mixed-use Development or Redevelopment	Development or redevelopment of property to be used for two or more different uses, all intended to be harmonious and complementary. An example is a high-rise building with retail shops on the first 2 floors, office space on floors 3 through 10, apartments on the next 10 floors, and a restaurant on the top floor.
Municipal Separate Storm Sewer System (MS4)	A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains), as defined in 40 CFR 122.26(b)(8): <ol style="list-style-type: none"> (1) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law...including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization or a designated and approved management agency under section 208 of the CWA) that discharges into waters of the United States; (2) Designed or used for collecting or conveying stormwater; (3) Which is not a combined sewer; and (4) Which is not part of a Publicly Owned Treatment Works (POTW), as defined in

	40 CFR 122.2.
Municipal Corporation Yards, Vehicle Maintenance/Material Storage Facilities/	Any Permittee-owned or -operated facility, or portion thereof, that: (1) Conducts industrial activity, operates or stores equipment, and materials; (2) Performs fleet vehicle service/maintenance including repair, maintenance, washing, or fueling; (3) Performs maintenance and/or repair of machinery/equipment;
National Pollutant Discharge Elimination System (NPDES)	A national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the CWA.
Notice of Intent (NOI)	The application form by which dischargers seek coverage under General Permits, unless the General Permit requires otherwise.
Parking Lot	Land area or facility for the parking or storage of motor vehicles used for business, commerce, industry, or personal use.
Permittee/Permittees	Municipal agency/agencies that are named in and subject to the requirements of this Permit.
Permit Effective Date	The date at least 45 days after Permit adoption, provided the Regional Administrator of U.S. EPA Region 9 has no objection, whichever is later.
Pervious Pavement	Pavement that stores and infiltrates rainfall at a rate equal to immediately surrounding unpaved, landscaped areas, or that stores and infiltrates the rainfall runoff volume described in C.3.d.
Point Source	Any discernible, confined, and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.
Pollutants of Concern	Pollutants that impair waterbodies listed under CWA section 303(d), pollutants associated with the land use type of a development, including pollutants commonly associated with urban runoff. Pollutants commonly associated with stormwater runoff include, but are not limited to, total suspended solids; sediment; pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc, and cadmium); petroleum products and polynuclear aromatic hydrocarbons; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers); oxygen-demanding substances (e.g., decaying vegetation and animal waste) litter and trash.
Potable Water	Water that is safe for domestic use, drinking, and cooking.
Pre-Project Runoff Conditions	Stormwater runoff conditions that exist onsite immediately before development activities occur. This definition is not intended to be interpreted as that period before any human-induced land activities occurred. This definition pertains to redevelopment as well as initial development.
Public Development	Any construction, rehabilitation, redevelopment or reconstruction of any public agency project, including but not limited to, libraries, office buildings, roads, and

	highways.
Redevelopment	Land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred.
Regional Monitoring Program (RMP)	A monitoring program aimed at determining San Francisco Bay Region receiving water conditions. The program was established in 1993 through an agreement among the Water Board, wastewater discharger agencies, dredgers, Municipal Stormwater Permittees and the San Francisco Estuary Institute to provide regular sampling of Bay sediments, water, and organisms for pollutants. The program is funded by the dischargers and managed by San Francisco Estuary Institute.
Regional Project	A regional or municipal stormwater treatment facility that discharges into the same watershed that the Regulated Project does.
Regulated Projects	Development projects as defined in Provision C.3.b.ii.
Residential Housing Subdivision	Any property development of multiple single-family homes or of dwelling units intended for multiple families/households (e.g., apartments, condominiums, and town homes).
Retrofitting	Installing improved pollution control devices at existing facilities to attain water quality objectives.
Sediments	Soil, sand, and minerals washed from land into water, usually after rain.
Solid Waste	All putrescible and nonputrescible solid, semisolid, and liquid wastes as defined by California Government Code Section 68055.1 (h).
Source Control BMP	Land use or site planning practices, or structural or nonstructural measures, that aim to prevent runoff pollution by reducing the potential for contact with rainfall runoff at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff.
Standard Industrial Classification (SIC)	A federal system for classifying establishments by the type of activity in which they are engaged using a four-digit code.
Stormwater Pumping Station	Mechanical device (or pump) that is installed in MS4s or pipelines to discharge stormwater runoff and prevent flooding.
Stormwater Treatment System	Any engineered system designed to remove pollutants from stormwater runoff by settling, filtration, biological degradation, plant uptake, media absorption/adsorption or other physical, biological, or chemical process. This includes landscape-based systems such as grassy swales and bioretention units as well as proprietary systems.
Surface Water Ambient Monitoring Program (SWAMP)	The State Water Board's program to monitor surface water quality; coordinate consistent scientific methods; and design strategies for improving water quality monitoring, assessment, and reporting.
Total Maximum Daily Loads (TMDLs)	The maximum amount of a pollutant that can be discharged into a waterbody from all sources (point and nonpoint) and still maintain water quality standards. Under CWA section 303(d), TMDLs must be developed for all waterbodies that do not meet water quality standards even after application of technology-based controls,

	more stringent effluent limitations required by a state or local authority, and other pollution control requirements such as BMPs.
Toxicity Identification Evaluation (TIE)	TIE is a series of laboratory procedures used to identify the chemical(s) responsible for toxicity to aquatic life. These procedures are designed to decrease, increase, or transform the bioavailable fractions of contaminants to assess their contributions to sample toxicity. TIEs are conducted separately on water column and sediment samples.
Trash and Litter	Trash consists of litter and particles of litter. California Government Code Section 68055.1 (g) defines litter as all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials, thrown or deposited on the lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing.
Treatment	Any method, technique, or process designed to remove pollutants and/or solids from polluted stormwater runoff, wastewater, or effluent.
Waste Load Allocations (WLAs)	A portion of a receiving water's TMDL that is allocated to one of its existing or future point sources of pollution.
Water Quality Control Plan (Basin Plan)	The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State within the Region, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives and discharge prohibitions. The Basin Plan was duly adopted and approved by the State Water Resources Control Board, U.S. EPA, and the Office of Administrative Law where required. The latest version is effective as of December 22, 2006.
Water Quality Objectives	The limits or levels of water quality elements or biological characteristics established to reasonably protect the beneficial uses of water or to prevent pollution problems within a specific area. Water quality objectives may be numeric or narrative.
Water Quality Standards	State-adopted and USEPA-approved water quality standards for waterbodies. The standards prescribe the use of the waterbody and establish the water quality criteria that must be met to protect designated uses. Water quality standards also include the federal and state anti-degradation policy.
Wet Season	October 1 through April 30 of each year

APPENDIX I

MUNICIPAL REGIONAL STORMWATER PERMIT FACT SHEET

**FACT SHEET/RATIONALE
TECHNICAL REPORT**

for

ORDER NO. R2-2009-0074

NPDES Permit No. CAS612008

**Municipal Regional Stormwater NPDES Permit
and
Waste Discharge Requirements**

for

The cities of Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, and Union City, Alameda County, the Alameda County Flood Control and Water Conservation District, and Zone 7 of the Alameda County Flood Control and Water Conservation District, which have joined together to form the Alameda Countywide Clean Water Program

The cities of Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District, which have joined together to form the Contra Costa Clean Water Program

The cities of Campbell, Cupertino, Los Altos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, and Sunnyvale, the towns of Los Altos Hills and Los Gatos, the Santa Clara Valley Water District, and Santa Clara County, which have joined together to form the Santa Clara Valley Urban Runoff Pollution Prevention Program

The cities of Belmont, Brisbane, Burlingame, Daly City, East Palo Alto, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Redwood City, San Bruno, San Carlos, San Mateo, and South San Francisco, the towns of Atherton, Colma, Hillsborough, Portola Valley, and Woodside, the San Mateo County Flood Control District, and San Mateo County, which have joined together to form the San Mateo Countywide Water Pollution Prevention Program

The cities of Fairfield and Suisun City, which have joined together to form the Fairfield-Suisun Urban Runoff Management Program

The City of Vallejo and the Vallejo Sanitation and Flood Control District

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I. CONTACT INFORMATION

Water Board Staff Contact: Dale Bowyer, 1515 Clay Street, Suite 1400, Oakland, CA 94612, 510-622-2323, 510-622-2501 (fax), email: dbowyer@waterboards.ca.gov

The Permit and other related documents can be downloaded from the Water Board website at: <http://www.waterboards.ca.gov/sanfranciscobay/mrp.htm>

Comments can be electronically submitted to mrp@waterboards.ca.gov.

All documents referenced in this Fact Sheet and in the Order are available for public review at the Water Board office, located at the address listed above. Public records are available for inspection during regular business hours, from 9:00 am to 4:00 pm, Monday through Friday, 12 - 1 pm excluded. Per the Governor's order calling for furloughs, the Water Board office will be closed the first three Fridays of each month through June 2010. To schedule an appointment to inspect public records, contact Melinda Wong at 510-622-2430.

II. PERMIT GOALS AND PUBLIC PROCESS

Goals

The Goals for the Municipal Regional Stormwater Permit (hereinafter, the Permit) Development Process include:

1. Consolidate six Phase I municipal stormwater NPDES permits into one consistent permit which is regional in scope.
2. Include more specificity in NPDES permit order language and requirements. Create (A) required stormwater management actions, (B) a specific level of implementation for each action or set of actions, and (C) reporting and effectiveness evaluation requirements for each action sufficient to determine compliance.
3. Incorporate the Stormwater Management Plan level of detail and specificity into the Permit. Stormwater Management Plans have always been considered integral to the municipal stormwater NPDES permits, but have not received the level of public review in the adoption process necessary relative to their importance in adequate stormwater pollutant management implementation.
4. Implement and enhance actions to control 303(d) listed pollutants, pollutants of concern, and achieve Waste Load Allocations adopted under Total Maximum Daily Loads.
5. Implement more specific and comprehensive stormwater monitoring, including monitoring for 303(d) listed pollutants.

Public Process

Water Board staff conducted a series of stakeholder meetings and workshops with the Permittees and other interested parties to develop this Permit over the past 3 years. These meetings included Water Board staff, representatives of the Permittees, representatives of

environmental groups, homebuilders, private citizens, and other interested parties. The following is a summary of the lengthy stakeholder process.

(2004–2005) Water Board staff and the Bay Area Stormwater Management Agencies Association (BASMAA) agreed to develop a municipal regional stormwater permit. Board staff and BASMAA held monthly meetings to agree on the regional permit approach and developed concepts and ground rules for a Steering Committee. The Steering Committee for the Permit began regular monthly meetings, and there was agreement to form work groups to develop options for permit program components in table format.

(2006) Water Board staff, BASMAA, and nongovernmental groups met and discussed the Performance Standard (i.e., actions, implementation levels, and reporting requirements) tables from six workgroups. In addition to the Steering Committee, Work Group Stakeholder meetings focused on the six program elements to complete the Performance Standard Tables and discuss other issues in preparation for creating the first Draft Permit Provisions. Two large public workshops were held in November with all interested stakeholders to discuss Work Group products.

(2007) The Water Board held a public workshop in March to receive public input. Board staff distributed an Administrative Draft Permit dated May 1, 2007, held multiple meetings and received comment.

(2007- 2008) On December 14, 2007, Board staff distributed the Tentative Order for a 77-day written public comment period ending February 29, 2008. A public hearing for oral testimony was held on March 11, 2008. During the remainder of 2008 there were additional meetings with stakeholders, and Board staff worked on revisions to the Tentative Order and produced responses to both written comments received by February 29, 2008, and oral comments received at the March 11, 2008, hearing. The Revised Tentative Order for the MRP was released on February 11, 2009, and a May 13, 2009, hearing before the Water Board was scheduled. Written comments on the revisions to the Tentative Order were received until April 3, 2009.

(2009) After the May 2009 MRP Public Hearing, Water Board staff held numerous meetings with the Permittees (via the Bay Area Stormwater Management Agencies Association) and other key stakeholders including Save the Bay, NRDC, the Northern California Homebuilders, S.F. BayKeeper and the U.S. EPA. These meetings have been focused on discussion of revisions to the MRP Tentative Order in response to comments received, in an effort to resolve issues primarily related to Provisions C.3 New Development, C.8 Monitoring, C.10 Trash Load Reduction, C.11 Mercury Controls, C.12 PCBs Controls, and C.15 Exempt Non-Stormwater Discharges.

Implementation

It is the Water Board's intent that this Permit shall ensure attainment of applicable water quality objectives and protection of the beneficial uses of receiving waters and associated habitat. This Permit requires that discharges shall not cause exceedances of water quality objectives nor shall they cause certain conditions to occur that create a condition of nuisance or water quality impairment in receiving waters. Accordingly, the Water Board is

requiring that these standard requirements be addressed through the implementation of technically and economically feasible control measures to reduce pollutants in stormwater discharges to the maximum extent practicable as provided in Provisions C.1 through C.15 of this Permit and section 402(p) of the CWA. Compliance with the Discharge Prohibitions, Receiving Water Limitations, and Provisions of this Permit is deemed compliance with the requirements of this Permit. If these measures, in combination with controls on other point and nonpoint sources of pollutants, do not result in attainment of applicable water quality objectives, the Water Board may invoke Provision C.1. and may reopen this Permit pursuant to Provisions C.1 and C.15 of this Permit to impose additional conditions that require implementation of additional control measures.

Each of the Permittees is individually responsible for adoption and enforcement of ordinances and policies, for implementation of assigned control measures or best management practices (BMPs) needed to prevent or reduce pollutants in stormwater, and for providing funds for the capital, operation, and maintenance expenditures necessary to implement such control measures/BMPs within its jurisdiction. Each Permittee is also responsible for its share of the costs of the area-wide component of the countywide program to which the Permittee belongs. Enforcement actions concerning non-compliance with the Permit will be pursued against individual Permittee(s) responsible for specific violations of the Permit.

III. BACKGROUND

Early Permitting Approach

The federal Clean Water Act (CWA) was amended in 1987 to address urban stormwater runoff pollution of the nation's waters. One requirement of the amendment was that many municipalities throughout the United States were obligated for the first time to obtain National Pollutant Discharge Elimination System (NPDES) permits for discharges of urban runoff from their Municipal Separate Storm Sewer Systems (MS4s). In response to the CWA amendment (and the pending federal NPDES regulations which would implement the amendment), the Water Board issued a municipal storm water Phase I permits in the early 1990s. These permits were issued to the entire county-wide urban areas of Santa Clara, Alameda, San Mateo and Contra Costa Counties, rather than to individual cities over 100,000 population threshold. The cities chose to collaborate in countywide groups, to pool resources and expertise, and share information, public outreach and monitoring costs, among other tasks.

During the early permitting cycles, the county-wide programs developed many of the implementation specifics which were set forth in their Stormwater Pollution Prevention Management Plans (Plans). The permit orders were relatively simple documents that referred to the stormwater Plans for implementation details. Often specific aspects of permit and Plan implementation evolved during the five year permit cycle, with relatively significant changes approved at the Water Board staff level without significant public review and comment.

Merging Permit Requirements and Specific Requirements Previously Contained in Stormwater Management Plans

US EPA stormwater rules for Phase I stormwater permits envisioned a process in which municipal stormwater management programs contained the detailed BMP and specific level of implementation information, and are reviewed and approved by the permitting agency before the municipal NPDES stormwater permits are adopted. The current and previous permits established a definition of a stormwater management program and required each Permittee to submit an urban runoff management plan and annual work plans for implementing its stormwater management program. An advantage to this approach was that it provided flexibility for Permittees to tailor their stormwater management programs to reflect local priorities and needs. However, Water Board staff found it difficult to determine Permittees' compliance with the current permits, due to the lack of specific requirements and measurable outcomes of some required actions. Furthermore, federal stormwater regulations require that modifications to stormwater management programs, such as annual revisions to urban runoff management plans, be approved through a public process.

Recent court decisions have reiterated that federal regulations and State law require that the implementation specifics of Municipal Stormwater NPDES permits be adopted after adequate public review and comment, and that no significant change in the permit requirements except minor modifications can occur during the permit term without a similar level of public review and comment.

This Permit introduces a modification to these previous approaches by establishing the stormwater management program requirements and defining up front, as part of the Permit Development Process, the minimum acceptable elements of the municipal stormwater management program. The advantages of this approach are that it satisfies the public involvement requirements of both the federal Clean Water Act and the State Water Code. An advantage for Permittees and the public of this approach is that the permit requirements are known at the time of permit issuance and not left to be determined later through iterative review and approval of work plans. While it may still be necessary to amend the Permit prior to expiration, any need to this should be minimized.

This Permit does not include approval of all Permittees' stormwater management programs or annual reports as part of the administration of the Permit. To do so would require significantly increased staff resources. Instead, minimum measures have been established to simplify assessment of compliance and allow the public to more easily assess each Permittee's compliance. Each Permit provision and its reporting requirements are written with this in mind. That is, each provision establishes the required actions, minimum implementation levels (i.e., minimum percentage of facilities inspected annually, escalating enforcement, reporting requirements for tracking projects, number of monitoring sites, etc.), and specific reporting elements to substantiate that these implementation levels have been met. Water Board staff will evaluate each individual Permittee's compliance through annual report review and the audit process.

The challenge in drafting the Permit is to provide the flexibility described above considering the different sizes and resources while ensuring that the Permit is still enforceable. To achieve this, the Permit frequently prescribes minimum measurable

outcomes, while providing Permittees with flexibility in the approaches they use to meet those outcomes. Enforceability has been found to be a critical aspect of the Permit. To avoid these types of situations, a balance between flexibility and enforceability has been crafted into the Permit.

Current Permit Approach

In the previous permit issuances, the detailed actions to be implemented by the Permittees were contained in Stormwater Management Plans, which were separate from the NPDES permits, and incorporated by reference. Because those plans were legally an integral part of the permits and were subject to complete public notice, review and comment, this permit reissuance incorporates those plan level details in the permit, thus merging the Permittees' stormwater management plans into the permit in one document. This Permit specifies the actions necessary to reduce the discharge of pollutants in stormwater to the maximum extent practicable, in a manner designed to achieve compliance with water quality standards and objectives, and effectively prohibit non-stormwater discharges into municipal storm drain systems and watercourses within the Permittees' jurisdictions. This set of specific actions is equivalent to the requirements that in past permit cycles were included in a separate stormwater management plan for each Permittee or countywide group of Permittees. With this permit reissuance, that level of specific compliance detail is integrated into permit language and is not a separate document.

The Permit includes requirements for the following components:

- Municipal Operations
- New Development and Redevelopment
- Industrial and Commercial Site Controls
- Illicit Discharge and Elimination
- Construction Site Controls
- Public Information and Outreach
- Water Quality Monitoring
- Pesticides Toxicity Controls
- Trash Reduction
- Mercury Controls
- PCBs Controls
- Copper Controls
- Polybrominated Diphenyl Ethers (PBDE), Legacy Pesticides, and Selenium
- Exempt and Conditionally Exempt Discharges

IV. ECONOMIC ISSUES

Economic discussions of urban runoff management programs tend to focus on costs incurred by municipalities in developing and implementing the programs. This is appropriate, and these costs are significant and a major issue for the Permittees. However, when considering the cost of implementing the urban runoff programs, it is also important

to consider the alternative costs incurred by not fully implementing the programs, as well as the benefits which result from program implementation.

It is very difficult to ascertain the true cost of implementation of the Permittees' urban runoff management programs because of inconsistencies in reporting by the Permittees. Reported costs of compliance for the same program element can vary widely from Permittee to Permittee, often by a very wide margin that is not easily explained.⁵⁷ Despite these problems, efforts have been made to identify urban runoff management program costs, which can be helpful in understanding the costs of program implementation.

In 1999, United States Environmental Protection Agency (USEPA) reported on multiple studies it conducted to determine the cost of urban runoff management programs. A study of Phase II municipalities determined that the annual cost of the Phase II program was expected to be \$9.16 per household. USEPA also studied 35 Phase I municipalities, finding costs to be similar to those anticipated for Phase II municipalities, at \$9.08 per household annually.⁵⁸

A study on program cost was also conducted by the Los Angeles Regional Water Quality Control Board (LARWQCB), where program costs reported in the municipalities' annual reports were assessed. The LARWQCB estimated that average per household cost to implement the MS4 program in Los Angeles County was \$12.50.

The State Water Resources Control Board (State Water Board) also commissioned a study by the California State University, Sacramento to assess costs of the Phase I MS4 program. This study is current and includes an assessment of costs incurred by the City of Encinitas in implementing its program. Annual cost per household in the study ranged from \$18-46, with the City of Encinitas representing the upper end of the range.⁵⁹ The cost of the City of Encinitas' program is understandable, given the City's coastal location, reliance on tourism, and consent decree with environmental groups regarding its program. For these reasons, as well as the general recognition the City of Encinitas receives for implementing a superior program, the City's program cost can be considered as the high end of the spectrum for Permittee urban runoff management program costs.

It is important to note that reported program costs are not all attributable to compliance with MS4 permits. Many program components, and their associated costs, existed before any MS4 permits were issued. For example, street sweeping and trash collection costs cannot be solely or even principally attributable to MS4 permit compliance, since these practices have long been implemented by municipalities. Therefore, true program cost resulting from MS4 permit requirements is some fraction of reported costs. The California State University, Sacramento study found that only 38% of program costs are new costs fully attributable to MS4 permits. The remainder of program costs were either pre-existing or resulted from enhancement of pre-existing programs.⁶⁰ The County of Orange found that even lesser amounts of program costs are solely attributable to MS4 permit compliance, reporting that the amount attributable to implement its Drainage Area Management Plan, its municipal

⁵⁷ LARWQCB, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003.p.2

⁵⁸ Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791-68792.

⁵⁹ State Water Board, 2005. NPDES Stormwater Cost Survey. P. ii

⁶⁰ Ibid. P. 58.

stormwater permit requirements, is less than 20% of the total budget. The remaining 80% is attributable to pre-existing programs.⁶¹

It is also important to acknowledge that the vast majority of costs that will be incurred as a result of implementing the Order are not new. Urban runoff management programs have been in place in this region for over 15 years. Any increase in cost to the Permittees will be incremental in nature.

Urban runoff management programs cannot be considered in terms of their costs only. The programs must also be viewed in terms of their value to the public. For example, household willingness to pay for improvements in fresh water quality for fishing and boating has been estimated by USEPA to be \$158-210.⁶² This estimate can be considered conservative, since it does not include important considerations such as marine waters benefits, wildlife benefits, or flood control benefits. The California State University, Sacramento study corroborates USEPA's estimates, reporting annual household willingness to pay for statewide clean water to be \$180.⁶³ When viewed in comparison to household costs of existing urban runoff management programs, these household willingness to pay estimates exhibit that per household costs incurred by Permittees to implement their urban runoff management programs remain reasonable.

Another important way to consider urban runoff management program costs is to consider the implementation cost in terms of costs incurred by not improving the programs. Urban runoff in southern California has been found to cause illness in people bathing near storm drains.⁶⁴ A study of south Huntington Beach and north Newport Beach found that an illness rate of about 0.8% among bathers at those beaches resulted in about \$3 million annually in health-related expenses.⁶⁵ Extrapolation of such numbers to the beaches and other water contact recreation in San Francisco Bay and the tributary creeks of the region could result in huge expenses to the public.

Urban runoff and its impact on receiving waters also places a cost on tourism. The California Division of Tourism has estimated that each out-of-state visitor spends \$101.00 a day. The experience of Huntington Beach provides an example of the potential economic impact of poor water quality. Approximately 8 miles of Huntington Beach were closed for two months in the middle of summer of 1999, impacting beach visitation and the local economy.

Finally, it is important to consider the benefits of urban runoff management programs in conjunction with their costs. A recent study conducted by USC/UCLA assessed the costs and benefits of implementing various approaches for achieving compliance with the MS4 permits in the Los Angeles Region. The study found that non-structural systems would cost \$2.8 billion but provide \$5.6 billion in benefit. If structural systems were determined to be needed, the study found that total costs would be \$5.7 to \$7.4 billion, while benefits could

⁶¹ County of Orange, 2000. A NPDES Annual Progress Report. P. 60. More current data from the County of Orange is not used in this discussion because the County of Orange no longer reports such information.

⁶² Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68793.

⁶³ State Water Board, 2005. NPDES Stormwater Cost Survey. P. iv.

⁶⁴ Haile, R.W., et al, 1996. An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay. Santa Monica Bay Restoration Project.

⁶⁵ Los Angeles Times, May 2, 2005. Here's What Ocean Germs Cost You: A UC Irvine Study Tallies the Cost of Treatment and Lost Wages for Beachgoers Who Get Sick.

reach \$18 billion.⁶⁶ Costs are anticipated to be borne over many years – probably ten years at least. As can be seen, the benefits of the programs are expected to considerably exceed their costs. Such findings are corroborated by USEPA, which found that the benefits of implementation of its Phase II storm water rule would also outweigh the costs.⁶⁷

V. LEGAL AUTHORITY

The following statutes, regulations, and Water Quality Control Plans provide the basis for the requirements of Order No. R2-2009-0074: CWA, California Water Code (CWC), 40 CFR Parts 122, 123, 124 (National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges, Final Rule), Part II of 40 CFR Parts 9, 122, 123, and 124 (National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule), Water Quality Control Plan – Ocean Waters of California (California Ocean Plan), Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan), 40 CFR 131 Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule (California Toxics Rule), and the California Toxics Rule Implementation Plan.

The legal authority citations below generally apply to directives in Order No. R2-2009-0074, and provide the Water Board with ample underlying authority to require each of the directives of Order No. R2-2009-0074.. Legal authority citations are also provided with each permit provision in this Fact Sheet.

CWA 402(p)(3)(B)(ii) – The CWA requires in section 402(p)(3)(B)(ii) that permits for discharges from municipal storm sewers “shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers.”

CWA 402(p)(3)(B)(iii) – The CWA requires in section 402(p)(3)(B)(iii) that permits for discharges from municipal storm sewers “shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.”

40 CFR 122.26(d)(2)(i)(B,C,E, and F) – Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B,C,D,E, and F) require that each Permittee’s permit application “shall consist of: (i) Adequate legal authority. A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to: [...] (B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer; (C) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water; (D) Control through interagency agreements among co-applicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system; (E) Require compliance with condition in ordinances, permits, contracts or orders; and (F) Carry out all

⁶⁶ LARWQCB, 2004. Alternative Approaches to Stormwater Control.

⁶⁷ Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791.

inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.”

40 CFR 122.26(d)(2)(iv) – Federal NPDES regulation 40 CFR 122.26(d)(2)(iv) requires “a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. [...] Proposed programs may impose controls on a system wide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. [...] Proposed management programs shall describe priorities for implementing controls.”

40 CFR 122.26(d)(2)(iv)(A -D) – Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A -D) require municipalities to implement controls to reduce pollutants in urban runoff from new development and significant redevelopment, construction, and commercial, residential, industrial, and municipal land uses or activities. Control of illicit discharges is also required.

CWC 13377 – CWC section 13377 requires that “Notwithstanding any other provision of this division, the state board or the regional boards shall, as required or authorized by the CWA, as amended, issue waste discharge requirements and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with anymore stringent effluent standards or limitation necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.”

Order No. R2-2009-0074 is an essential mechanism for achieving the water quality objectives that have been established for protecting the beneficial uses of the water resources in the San Francisco Bay Region. Federal NPDES regulation 40 CFR 122.44(d)(1) requires MS4 permits to include any requirements necessary to “achieve water quality standards established under CWA section 303, including State narrative criteria for water quality.” The term “water quality standards” in this context refers to a water body’s beneficial uses and the water quality objectives necessary to protect those beneficial uses, as established in the Basin Plan.

State Mandates

This Permit does not constitute an unfunded local government mandate subject to subvention under Article XIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. First, this Permit implements federally mandated requirements under CWA section 402, subdivision (p)(3)(B). (33 U.S.C. § 1342(p)(3)(B).) This includes federal requirements to effectively prohibit non-stormwater discharges, to reduce the discharge of pollutants to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. Federal cases have held that these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (Natural Resources Defense Council, Inc. v. USEPA

(9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.) The authority exercised under this Permit is not reserved state authority under the CWA's savings clause (cf. *Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements that are not less stringent than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for MS4. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, *City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389; *Building Industry Association of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 882-883.)

Likewise, the provisions of this Permit to implement total maximum daily loads (TMDLs) are federal mandates. The CWA requires TMDLs to be developed for waterbodies that do not meet federal water quality standards. (33 U.S.C. § 1313(d).) Once USEPA or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable WLA. (40 CFR 122.44(d)(1)(vii)(B).)

Second, the local agencies' (Permittees') obligations under this Permit are similar to, and in many respects less stringent than, the obligations of nongovernmental dischargers who are issued NPDES permits for stormwater discharges. With a few inapplicable exceptions, the CWA regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the Porter-Cologne regulates the discharge of waste (Water Code, section 13263), both without regard to the source of the pollutant or waste. As a result, the costs incurred by local agencies to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The CWA and the Porter-Cologne Water Quality Control Act largely regulate stormwater with an even hand, but to the extent that there is any relaxation of this evenhanded regulation, it is in favor of the local agencies. Except for MS4s, the CWA requires point source dischargers, including discharges of stormwater associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C. § 1311(b)(1)(C), *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1164-1165 [noting that industrial stormwater discharges must strictly comply with water quality standards].) As discussed in prior State Water Board decisions, this Permit does not require strict compliance with water quality standards. (SWRCB Order No. WQ 2001-15, p. 7.) The Permit, therefore, regulates the discharge of waste in municipal stormwater more leniently than the discharge of waste from nongovernmental sources.

Third, the Permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Permit. The fact sheet demonstrates that numerous activities contribute to the pollutant loading in the MS4. Permittees can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., *Apartment Association of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The ability of a local agency to defray the cost of a program without raising

taxes indicates that a program does not entail a cost subject to subvention. (County of Fresno v. State of California (1991) 53 Cal.3d 482, 487-488.)

Fourth, the Permittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their discharges. To the extent Permittees have voluntarily availed themselves of the Permit, the program is not a state mandate. (Accord County of San Diego v. State of California (1997) 15 Cal.4th 68, 107-108.) Likewise, the Permittees have voluntarily sought a program-based municipal stormwater permit in lieu of a numeric limits approach. (See City of Abilene v. USEPA (5th Cir. 2003) 325 F.3d 657, 662-663 [noting that municipalities can choose between a management permit or a permit with numeric limits].) The Permittees' voluntary decision to file a report of waste discharge proposing a program-based permit is a voluntary decision not subject to subvention. (See Environmental Defense Center v. USEPA (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the Permittees' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under State law predates the enactment of Article XIII B, Section (6) of the California Constitution.

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

Discussion: In 1987, Congress established CWA Amendments to create requirements for storm water discharges under the NPDES program, which provides for permit systems to regulate the discharge of pollutants. Under the Porter-Cologne Water Quality Control Act, the State Water Board and Regional Water Quality Control Boards (Water Boards) have primary responsibility for the coordination and control of water quality, including the authority to implement the CWA. Porter-Cologne (section 13240) directs the Water Boards to set water quality objectives via adoption of Basin Plans that conform to all state policies for water quality control. As a means for achieving those water quality objectives, Porter-Cologne (section 13243) further authorizes the Water Boards to establish waste discharge requirements (WDRs) to prohibit waste discharges in certain conditions or areas. Since 1990, the Water Board has issued area-wide MS4 NPDES permits. The Permit will re-issue Order Nos. 99-058, 99-059, 01-024, R2-2003-0021, R2-2003-0034 to comply with the CWA and attain water quality objectives in the Basin Plan by limiting the contributions of pollutants conveyed by urban runoff. Further discussions of the legal authority associated with the prohibitions and directives of the Permit are provided in section V. of this document.

This Permit supersedes NPDES Permit Nos. CAS029718, CAS029831, CAS029912, CAS029921, CAS612005, and CAS612006.

Basin Plan

The Urban Runoff Management, Comprehensive Control Program section of the Basin Plan requires the Permittees to address existing water quality problems and prevent new problems associated with urban runoff through the development and implementation of a comprehensive control program focused on reducing current levels of pollutant loading to storm drains to the maximum extent practicable. The Basin Plan comprehensive program requirements are designed to be consistent with federal regulations (40 CFR Parts 122-124) and are implemented through issuance of NPDES permits to owners and operators of MS4s. A summary of the regulatory provisions is contained in Title 23 of the California Code of Regulations at section 3912. The Basin Plan identifies beneficial uses and establishes water quality objectives for surface waters in the Region, as well as effluent limitations and discharge prohibitions intended to protect those uses. This Permit implements the plans, policies, and provisions of the Water Board's Basin Plan.

Statewide General Permits

The State Water Board has issued NPDES general permits for the regulation of stormwater discharges associated with industrial activities and construction activities. To effectively implement the New Development (and significant redevelopment) and Construction Controls, Illicit Discharge Controls, and Industrial and Commercial Discharge Controls components in this Permit, the Permittees will conduct investigations and local regulatory activities at industrial and construction sites covered by these general permits. However, under the CWA, the Water Board cannot delegate its own authority to enforce these general permits to the Permittees. Therefore, Water Board staff intends to work cooperatively with the Permittees to ensure that industries and construction sites within the Permittees' jurisdictions are in compliance with applicable general permit requirements and are not subject to uncoordinated stormwater regulatory activities.

Regulated Parties

Each of the Permittees listed in this Permit owns or operates a MS4, through which it discharges urban runoff into waters of the United States within the San Francisco Bay Region. These MS4s fall into one or more of the following categories: (1) a medium or large MS4 that services a population of greater than 100,000 or 250,000 respectively; or (2) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the United States.

Permit Coverage

The Permittees each have jurisdiction over and maintenance responsibility for their respective MS4s in the Region. Federal, State or regional entities within the Permittees' boundaries, not currently named in this Permit, operate storm drain facilities and/or discharge stormwater to the storm drains and watercourses covered by this Permit. The Permittees may lack jurisdiction over these entities. Consequently, the Water Board recognizes that the Permittees should not be held responsible for such facilities and/or discharges. The Water Board will consider such facilities for coverage under NPDES permitting pursuant to USEPA Phase II stormwater regulations. Under Phase II, the Water

Board intends to permit these federal, State, and regional entities through use of a Statewide Phase II NPDES General Permit.

Discussion: Section 402 of the CWA prohibits the discharge of any pollutant to waters of the United States from a point source, unless that discharge is authorized by a NPDES permit. Though urban runoff comes from a diffuse source, it is discharged through MS4s, which are point sources under the CWA. Federal NPDES regulation 40 CFR 122.26(a) (iii) and (iv) provide that discharges from MS4s, which service medium or large populations greater than 100,000 or 250,000 respectively, shall be required to obtain a NPDES permit. Federal NPDES regulation 40 CFR 122.26(a)(v) also provides that a NPDES permit is required for “A [storm water] discharge which the Director, or in States with approved NPDES programs, either the Director or the USEPA Regional Administrator, determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.” Such sources are then designated into the program.

VI. PERMIT PROVISIONS

A. Discharge Prohibitions

Prohibition A.1. Legal Authority – CWA 402(p)(3)(B)(ii) – The CWA requires in section 402(p)(3)(B)(ii) that permits for discharges from municipal storm sewers “shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers.”

Prohibition A.2. Legal Authority – San Francisco Bay Basin Plan, 2006 Revision, Chapter 4 Implementation, Table 4-1, Prohibition 7.

B. Receiving Water Limitations

Receiving Water Limitation B.1. Legal Authority – Receiving Water Limitations are retained from previous Municipal Stormwater Runoff NPDES permits. They reflect applicable water quality standards from the Basin Plan.

Receiving Water Limitation B.2. Legal Authority – Receiving Water Limitations are retained from previous Municipal Stormwater Runoff NPDES permits. They reflect applicable water quality standards from the Basin Plan.

C. Provisions

C.1. Compliance with Discharge Prohibitions and Receiving Water Limitations

Legal Authority

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: The Water Board's Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) contains the following waste discharge prohibition: "The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination, or nuisance as defined in California Water Code Section 13050, is prohibited."

California Water Code section 13050(l) states "(1) 'Pollution' means an alteration of the quality of waters of the state by waste to a degree which unreasonably affects either of the following: (A) The water for beneficial uses. (B) Facilities which serve beneficial uses. (2) 'Pollution' may include 'contamination.'"

California Water Code section 13050(k) states "'Contamination' means an impairment of the quality of waters of the state by waste to a degree which creates a hazard to public health through poisoning or through the spread of disease. 'Contamination' includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected."

California Water Code section 13050(m) states "'Nuisance' means anything which meets all of the following requirements: (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. (3) Occurs during, or as a result of, the treatment or disposal of wastes."

California Water Code section 13241 requires each water board to "establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance [...]."

California Water Code Section 13243 provides that a water board, "in a water quality control plan or in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted."

California Water Code Section 13263(a) provides that waste discharge requirements prescribed by the water board implement the Basin Plan.

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A -D) require municipalities to implement controls to reduce pollutants in urban runoff from commercial, residential, industrial, and construction land uses or activities.

Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(A -D) require municipalities to have legal authority to control various discharges to their MS4.

Federal NPDES regulation 40 CFR 122.44(d)(1) requires municipal storm water permits to include any requirements necessary to "[a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality."

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

State Water Resources Control Board (“State Water Board”) Order WQ 1999-05, is a precedential order requiring that municipal stormwater permits achieve water quality standards and water quality standard based discharge prohibitions through the implementation of control measures, by which Permittees’ compliance with the permit can be determined. The State Water Board Order specifically requires that Provision C.1 include language that Permittees shall comply with water quality standards based discharge prohibitions and receiving water limitations through timely implementation of control measures and other actions to reduce pollutants in the discharges. State Water Board Order WQ 2001-15 refines Order 1999-05 by requiring an iterative approach to compliance with water quality standards that involves ongoing assessments and revisions.

C.2. Municipal Operations

Legal Authority

The following legal authority applies to Provision C.2:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), California Water Code (CWC) section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(1) requires, “A description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(3) requires, “A description for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(4) requires, “A description of procedures to assure that flood management projects assess the impacts on the water quality of receiving waterbodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(5) requires, “A description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, which shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(6) requires, “A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

Fact Sheet Findings in Support of Provision C.2

- C.2-1** Municipal maintenance activities are potential sources of pollutants unless appropriate inspection, pollutant source control, and cleanup measures are implemented during routine maintenance works to minimize pollutant discharges to storm drainage facilities.

Sediment accumulated on paved surfaces, such as roads, parking lots, parks, sidewalks, landscaping, and corporation yards, is the major source of point source pollutants found in urban runoff. Thus, Provision C.2 requires the Permittees to designate minimum BMPs for all municipal facilities and activities as part of their ongoing pollution prevention efforts as set forth in this Permit. Such prevention measures include, but are not limited to, activities as described below. The work of municipal maintenance personnel is vital to minimize stormwater pollution, because personnel work directly on municipal storm drains and other municipal facilities. Through work such as inspecting and cleaning storm drain drop inlets and pipes and conducting municipal construction and maintenance activities upstream of the storm drain, municipal maintenance personnel are directly responsible for preventing and removing pollutants from the storm drain. Maintenance personnel also play an important role in educating the public and in reporting and cleaning up illicit discharges.

- C.2-2** Road construction and other activities can disturb the soil and drainage patterns to streams in undeveloped areas, causing excess runoff and thereby erosion and the release of sediment. In particular, poorly designed roads can act as man-made drainages that carry runoff and sediment into natural streams, impacting water quality.

Provision C.2 also requires the Permittees to implement effective BMPs for the following rural works maintenance and support activities: (a) Road design, construction, maintenance, and repairs in rural areas that prevent and control road-related erosion and sediment transport; (b) Identification and prioritization of rural roads maintenance on the basis of soil erosion potential, slope steepness, and stream habitat resources; (c) Road and culvert construction designs that do not impact creek functions. New or replaced culverts shall not create a migratory fish passage barrier, where migratory fish are present, or lead to stream instability; (d) Development and implement an inspection program to maintain roads structural integrity and prevent impacts on water quality; (e) Provide adequate maintenance of rural roads adjacent to streams and riparian habitat to reduce erosion, replace damaging shotgun culverts, re-grade roads to slope outward where consistent with road engineering safety standards, and install water bars; and (f) When replacing existing culverts or redesigning new culverts or bridge crossings use measures to reduce erosion, provide fish passage and maintain natural stream geomorphology in a stable manner.

Road construction, culvert installation, and other rural maintenance activities can disturb the soil and drainage patterns to streams in undeveloped areas, causing excess runoff and thereby erosion and the release of sediment. Poorly

designed roads can act as preferential drainage pathways that carry runoff and sediment into natural streams, impacting water quality. In addition, other rural public works activities, including those the BMP approach would address, have the potential to significantly affect sediment discharge and transport within streams and other waterways, which can degrade the beneficial uses of those waterways. This Provision would help ensure that these impacts are appropriately controlled.

Specific Provision C.2 Requirements

Provision C.2.a-f. (Operation and Maintenance of Municipal Separate Storm Sewer Systems (MS4) facilities) requires that the Permittees implement appropriate pollution control measures during maintenance activities and to inspect and, if necessary, clean municipal facilities such as conveyance systems, pump stations, and corporation yards, before the rainy season. The requirements will assist the Permittees to prioritize tasks, implement appropriate BMPs, evaluate the effectiveness of the implemented BMPs, and compile and submit annual reports.

Provision C.2.d. (Stormwater Pump Stations) In late 2005, Board staff investigated the occurrence of low salinity and dissolved oxygen conditions in Old Alameda Creek (Alameda County) and Alviso Slough (Santa Clara County) in September and October of 2005. Board staff became aware of this problem in their review of receiving water and discharge sampling conducted by the U.S. Geological Survey as part of its routine monitoring on discharges associated with the former salt ponds managed by the U.S. Fish and Wildlife Service in Santa Clara County and the California Department of Fish and Game in Alameda County.

In the case of Old Alameda Creek, discharge of black-colored water from the Alvarado pump station to the slough was observed at the time of the data collection on September 7, 2005, confirming dry weather urban runoff as the source of the documented violations of the 5 mg/L dissolved oxygen water quality objective. Such conditions were measured again on September 21, 2005.

On October 17, 2005, waters in Alviso Slough were much less saline than the salt ponds and had the lowest documented dissolved oxygen of the summer, suggesting a dry weather urban runoff source. The dissolved oxygen sag was detected surface to bottom at 2.3 mg/L at a salinity of less than 1 part per thousand (ppt), mid-day, when oxygen levels should be high at the surface. The sloughs have a typical depth of 6 feet.

Board staff's investigations of these incidents, documented in a memorandum,⁶⁸ found that "storm water pump stations, universally operated by automatic float triggers, have been confirmed as the cause in at least one instance, and may represent an overlooked source of controllable pollution to the San Francisco Bay Estuary and its tidal sloughs. . . the discharges of dry weather urban runoff from these pump stations are not being

⁶⁸ Internal Water Board Memo dated December 2, 2005: "Dry Weather Urban Weather Urban Runoff Causing or Contributing to Water Quality Violations: Low Dissolved Oxygen (DO) in Old Alameda Creek and Alviso Slough"

managed to protect water quality, and [that] surveillance monitoring has detected measurable negative water quality consequences of this current state of pump station management.”

Pump station discharges of dry weather urban runoff can cause violations of water quality objectives. These discharges are controllable point sources of pollution that are virtually unregulated. The Water Board needs a complete inventory of dry weather urban runoff pump stations and to require BMP development and implementation for these discharges now. In the long term, Water Board staff should prioritize the sites from the regional inventory for dry weather diversion to sanitary sewers and encourage engineering feasibility studies to accomplish the diversions in a cost-effective manner. Structural treatment alternatives should be explored for specific pump stations.

To address the short term goals identified in the previous paragraph, Provision C.2.g. requires the Permittees to implement the following measures to reduce pollutant discharges to stormwater runoff from Permittee-owned or operated pump stations:

1. Establish an inventory of pump stations within each Permittee’s jurisdiction, including pump station locations and key characteristics, and inspection frequencies.
2. Inspect these pump stations regularly, but at least two times a year, to address water quality problems, including trash control and sediment and debris removal.
3. Inspect trash racks and oil absorbent booms at pump stations in the first business day after ¼-inch within 24 hours and larger storm events. Remove debris in trash racks and replace oil absorbent booms, as needed.

C.3. New Development and Redevelopment

Legal Authority

Broad Legal Authority: CWA Sections 402(p)(3)(B)(ii-iii), CWA Section 402(a), CWC Section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F), 40 CFR 131.12, and 40 CFR 122.26(d)(2)(iv).

Fact Sheet Findings in Support of Provision C.3

- C.3-1** Urban development begins at the land use planning phase; therefore, this phase provides the greatest cost-effective opportunities to protect water quality in new development and redevelopment. When a Permittee incorporates policies and principles designed to safeguard water resources into its General Plan and development project approval processes, it has taken a critical step toward the preservation and most of local water resources for current and future generations.
- C.3-2** Provision C.3. is based on the assumption that Permittees are responsible for considering potential stormwater impacts when making planning and land use decisions. The goal of Provision C.3. is for Permittees to use their planning authority to include appropriate source control, site design, and stormwater treatment measures to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flow from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques. Neither Provision C.3. nor any of its requirements are intended to restrict or control local land use decision-making authority.
- C.3-3** Certain control measures implemented or required by Permittees for urban runoff management might create a habitat for vectors (e.g., mosquitoes and rodents) if not properly designed or maintained. Close collaboration and cooperative efforts among Permittees, local vector control agencies, Water Board staff, and the State Department of Public Health are necessary to minimize potential nuisances and public health impacts resulting from vector breeding.
- C.3-4** The Water Board recognized in its Policy on the Use of Constructed Wetlands for Urban Runoff Pollution Control (Resolution No. 94-102) that urban runoff treatment wetlands that are constructed and operated pursuant to that Resolution and are constructed outside a creek or other receiving water are stormwater treatment systems and, as such, are not waters of the United States subject to regulation pursuant to Sections 401 or 404 of the federal Clean Water Act. Water Board staff is working with the California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS) to identify how maintenance for stormwater treatment controls required under permits such as this Permit can be appropriately streamlined, given CDFG and USFWS requirements, and particularly those that address special status species. This Permit requires Permittees to ensure that constructed wetlands installed by

Regulated Projects are consistent with Resolution No. 94-102 and the operation and maintenance requirements contained therein.

C.3-5 The Permit requires Permittees to ensure that onsite, joint, and offsite stormwater treatment systems and HM controls installed by Regulated Projects are properly operated and maintained for the life of the projects. In cases where the responsible parties for the treatment systems or HM controls have worked diligently and in good faith with the appropriate state and federal agencies to obtain approvals necessary to complete maintenance activities for the treatment systems or HM controls, but these approvals are not granted, the Permittees shall be considered by the Water Board to be in compliance with Provision C.3.h.iii. of the Permit.

Specific Provision C.3 Requirements

Provision C.3.a. (New Development and Redevelopment Performance Standard Implementation) sets forth essentially the same legal authority, development review and permitting, environmental review, training, and outreach requirements that are contained in the existing permits. This Provision also requires the Permittees to encourage all projects not regulated by Provision C.3., but that are subject to the Permittees' planning, building, development, or other comparable review, to include adequate source control and site design measures, which include discharge of appropriate wastestreams to the sanitary sewer, subject to the local sanitary agency's authority and standards. Lastly, this Provision requires Permittees to revise, as necessary, their respective General Plans to integrate water quality and watershed protection with water supply, flood control, habitat protection, groundwater recharge, and other sustainable development principles and policies. Adequate implementation time has been allocated to Provisions C.3.a.i.(6)-(8), which may be considered new requirements.

Provision C.3.b. (Regulated Projects) establishes the different categories of new development and redevelopment projects that Permittees must regulate under Provision C.3. These categories are defined on the basis of the land use and the amount of impervious surface created and/or replaced by the project because all impervious surfaces contribute pollutants to stormwater runoff and certain land uses contribute more pollutants. Impervious surfaces can neither absorb water nor remove pollutants as the natural, vegetated soil they replaced can. Also, urban development creates new pollution by bringing higher levels of car emissions that are aerially deposited, car maintenance wastes, pesticides, household hazardous wastes, pet wastes, and trash, which can all be washed into the storm sewer.

Provision C.3.b.ii.(1) lists Special Land Use Categories that are already regulated under the current stormwater permits. Therefore, extra time is not necessary for the Permittees to comply with this Provision, so the Permit Effective Date is set as the required implementation date. For these categories, the impervious surface threshold (for classification as a Regulated Project subject to Provision C.3.) will be decreased from the current 10,000 ft² to 5,000 ft² beginning two years from the Permit Effective Date. These special land use categories represent land use types

that may contribute more polluted stormwater runoff. Regulation of these special land use categories at the lower impervious threshold of 5,000 square feet is considered the maximum extent practicable and is consistent with State Board guidance, court decisions, and other Water Boards' requirements. In the precedential decision contained in its WQ Order No. 2000-11, the State Board upheld the SUSMP (Standard Urban Stormwater Mitigation Plan) requirements issued by the Los Angeles Water Board's Executive Officer on March 8, 2000, and found that they constitute MEP for addressing pollutant discharges resulting from Priority Development Projects. The State Board re-affirmed that SUSMP requirements constitute MEP in their Order WQ 2001-15. Provision C.3.b.ii.(1)'s requirement that development projects in the identified Special Land Use Categories adding and/or replacing > 5000 ft² of impervious surface shall install hydraulically sized stormwater treatment systems is consistent with the SUSMP provisions upheld by the State Board. Provision C.3.b.ii.(1) is also consistent with Order No. R9-2007-0001 issued by the San Diego Water Board, Order Nos. R4-2009-0057 and R4-2001-182 issued by the Los Angeles Water Board, Order No. 2009-0030 issued by the Santa Ana Water Board, and State Board's Order WQ 2003-0005 issued to Phase II MS4s. Under Order WQ 2003-0005, Phase II MS4s with populations of 50,000 and greater must apply the lower 5000 ft² threshold for requiring stormwater treatment systems by April 2008. The MRP allows two years from the MRP effective date for the Permittees to implement the lower 5000 ft² threshold for the special land use categories, three and half years later than the Phase II MS4s. However, the additional time is necessary for the Permittees to revise ordinances and permitting procedures and conduct training and outreach.

This Provision contains a "grandfathering" clause, which allows any private development project in a special land use category for which a planning application has been deemed complete by a Permittee on or before the Permit effective date to be exempted from the lower 5,000 square feet impervious surface threshold (for classification as a Regulated Project) as long as the project applicant is diligently pursuing the project. Diligent pursuance may be demonstrated by the project applicant's submittal of supplemental information to the original application, plans, or other documents required for any necessary approvals of the project by the Permittee. If during the time period between the Permit effective date and the required implementation date of December 1, 2011, for the 5000 square feet threshold, the project applicant has not taken any action to obtain the necessary approvals from the Permittee, the project will then be subject to the lower 5000 square feet impervious surface threshold specified in Provision C.3.b.ii.(1).

For any private development project in a special land use category with an application deemed complete after the Permit effective date, the lower 5000 square feet impervious surface threshold (for classification as a Regulated Project) shall not apply if the project applicant has received final discretionary approval for the project before the required implementation date of December 1, 2011 for the 5000 square feet threshold.

Previous stormwater permits also used the “application deemed complete” date as the date for determining Provision C.3. applicability, but it was tied to the implementation date for new requirements and not the Permit effective date. The Permit Streamlining Act requires that a public agency must determine whether a permit application is complete within 30 days after receipt; if the public agency does not make this determination, the application is automatically deemed complete after 30 days. Data we have collected from audits and file reviews as well as reported to us by Permittees confirm that in many cases, the development permit applications have indeed not been reviewed for compliance with Provision C.3. requirements and yet have automatically been deemed complete 30 days after the application submittal date. As soon as the Permit is adopted, there is certainty about any new requirements that must be implemented during the Permit term. Therefore, the “application deemed complete” date should only be used to exempt projects that have reached this milestone by the Permit effective date and not years later at a new requirement’s implementation date. However, this change requires consideration of those applications that are deemed complete after the Permit effective date. Because there is certainty with regard to new requirements as soon as the Permit becomes effective, we have tied the “final discretionary approval” date to a new requirement’s implementation date for determining whether to exempt the projects with applications deemed complete after the Permit effective date. After a project receives “final discretionary approval” it would be too late in the permitting process to implement new requirements, particularly since this type of approval requires actions by city councils or boards of supervisors. Therefore, the “grandfathering” language is a hybrid that makes use of both the “application deemed complete” date and the “final discretionary approval” date, two known and recognized milestones in development planning.

As for private projects, public projects should be far enough along in the design and approval process to warrant being grandfathered and essentially exempted from complying with the lower 5000 ft² threshold when it becomes effective. Previous stormwater permits grandfathered projects that only had funds committed by the new threshold’s effective date, which was too early because projects can be held for years before design can begin, well after funding commitments have been made. Conversely, application of the grandfathering exemption to projects that have construction scheduled to begin by the threshold effective date (or 2 years after the MRP effective date) may be too late in the permitting process to implement new threshold requirements, particularly since this type of approval requires actions by city councils or boards of supervisors. Therefore, the Permit provides the grandfathering exemption for projects that have construction set to begin within 1 year of the threshold effective date (or 3 years after the MRP effective date).

Provisions C.3.b.ii.(2)-(3) describe land use categories that are already regulated under the current stormwater permits; therefore, extra time is not necessary for the Permittees to comply with these Provisions and the implementation date is the Permit effective date. Because the Vallejo Permittees do not have post-

construction requirements in their current stormwater permit, the Permit allows an extra year for them to comply with these Provisions.

Provision C.3.b.ii.(4) applies to road projects adding and/or replacing 10,000 ft² of impervious surface, which include the construction of new roads and sidewalks and bicycle lanes built as part of the new roads; widening of existing roads with additional traffic lanes; and construction of impervious trails that are greater than 10 feet wide or are creekside (within 50 feet of the top of bank). Although widening existing roads with bike lanes and sidewalks increases impervious surface and therefore increases stormwater pollutants because of aerial deposition, they have been excluded from this Provision because we recognize the greater benefit that bike lanes and sidewalks provide by encouraging less use of automobiles. Likewise, this Provision also contains specific exclusions for: sidewalks built as part of a new road and built to direct stormwater runoff to adjacent vegetated areas; bike lanes built as part of a new road but not hydraulically connected to the new road and built to direct stormwater runoff to adjacent vegetated areas; impervious trails built to direct stormwater runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees; and sidewalks, bike lanes, or trails constructed with permeable surfaces.

In the case of road widening projects where additional lanes of traffic are added, the 50% rule also applies. That is, the addition of traffic lanes resulting in an alteration of more than 50 percent of the impervious surface of an existing street or road that was not subject to Provision C.3, the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire street or road that had additional traffic lanes added).

Where the addition of traffic lanes results in an alteration of less than 50 percent of the impervious surface of an existing street or road that was not subject to Provision C.3, only the new and/or replaced impervious surface of the project must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from only the new traffic lanes). However, if the stormwater runoff from the existing traffic lanes and the added traffic lanes cannot be separated, any onsite treatment system must be designed and sized to treat stormwater runoff from the entire street or road. If an offsite treatment system is installed or in-lieu fees paid in accordance with Provision C.3.e., the offsite treatment system or in-lieu fees must address only the stormwater runoff from the added traffic lanes.

Because road widening and trail projects belong to a newly added category of Regulated Projects, adequate implementation time has been included as well as “grandfathering” language. (See discussion under Provision C.3.b.ii.(1).)

Provision C.3.b.iii. requires that the Permittees cumulatively complete 10 pilot “green street” projects within the Permit term. This Provision was originally intended to require stormwater treatment for road rehabilitation projects on

arterial roads that added and/or replaced > 10,000 ft² of impervious surface. We acknowledge the logistical difficulties in retrofitting roads with stormwater treatment systems as well as the funding challenges facing municipalities in the Bay Area. However, we are aware that some cities have or will have funding for “green street” retrofit projects that will provide water quality benefits as well as meet broader community goals such as fostering unique and attractive streetscapes that protect and enhance neighborhood livability, serving to enhance pedestrian and bike access, and encouraging the planting of landscapes and vegetation that contribute to reductions in global warming. Therefore, instead of requiring post-construction treatment for all road rehabilitation of arterial streets, this Provision requires the completion of 10 pilot “green street” projects by the Permittees within the Permit term. These projects must incorporate LID techniques for site design and treatment in accordance with Provision C.3.c. and provide stormwater treatment pursuant to Provision C.3.d. and must be representative of the three different types of streets: arterial, collector, and local. To ensure equity and an even distribution of projects, at least two pilot projects must be located in each of the following counties: Alameda, Contra Costa, San Mateo, and Santa Clara. Parking lot projects are acceptable as pilot projects as long as both parking lot and street runoff is addressed. Because these are pilot projects, we have not specified a minimum or maximum size requirement and the details of which cities will have these projects are to be determined by the Permittees.

Provision C.3.c (Low Impact Development (LID)) recognizes LID as a cost-effective, beneficial, holistic, integrated stormwater management strategy⁶⁹. The goal of LID is to reduce runoff and mimic a site’s predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treat stormwater as a resource, rather than a waste product. Practices used to adhere to these LID principles include measures such as preserving undeveloped open space, rain barrels and cisterns, green roofs, permeable pavement, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes.

This Provision sets forth a three-pronged approach to LID with source control, site design, and stormwater treatment requirements. The concepts and techniques for incorporating LID into development projects, particularly for site design, have been extensively discussed in BASMAA’s Start at the Source manual (1999) and its companion document, Using Site Design Techniques to Meet Development Standards for Stormwater Quality (May 2003), as well as in various other LID reference documents.

Provision C.3.c.i.(1) lists source control measures that must be included in all Regulated Projects as well as some that are applicable only to certain types of

⁶⁹ USEPA, *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices* (Publication Number EPA 841-F-07-006, December 2007) <http://www.epa.gov/owow/nps/lid/costs07>

businesses and facilities. These measures are recognized nationwide as basic, effective techniques to minimize the introduction of pollutants into stormwater runoff. The current stormwater permits also list these methods; however, they are encouraged rather than required. By requiring these source control measures, this Provision sets a consistent, achievable standard for all Regulated Projects and allows the Board to more systematically and fairly measure permit compliance. This Provision retains enough flexibility such that Regulated Projects are not forced to include measures inappropriate, or impracticable, to their projects. This Provision does not preclude Permittees from requiring additional measures that may be applicable and appropriate.

Provision C.3.c.i.(2)(a) lists site design elements that must be implemented at all Regulated Projects. These design elements are basic, effective techniques to minimize pollutant concentrations in stormwater runoff as well as the volume and frequency of discharge of the runoff. On the basis of the Board staff's review of the Permittees' Annual Reports and CWA section 401 certification projects, these measures are already being done at many projects. One design element requires all Regulated Projects to include at least one site design measure from a list of six which includes recycling of roof runoff, directing runoff into vegetated areas, and installation of permeable surfaces instead of traditional paving. All these measures serve to reduce the amount of runoff and its associated pollutants being discharged from the Regulated Project.

Provision C.3.c.i.(2)(b) requires each Regulated Project to treat 100% of the Provision C.3.d. runoff with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility. LID treatment measures are harvesting and re-use, infiltration, evapotranspiration, or biotreatment. A properly engineered and maintained biotreatment system may be considered only if it is infeasible to implement harvesting and re-use, infiltration, or evapotranspiration at a project site. Infeasibility may result from conditions including the following:

- Locations where seasonal high groundwater would be within 10 feet of the base of the LID treatment measure.
- Locations within 100 feet of a groundwater well used for drinking water.
- Development sites where pollutant mobilization in the soil or groundwater is a documented concern.
- Locations with potential geotechnical hazards.
- Smart growth and infill or redevelopment sites where the density and/or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.
- Locations with tight clay soils that significantly limit the infiltration of stormwater.

This Provision recognizes the benefits of harvesting and reuse, infiltration and evapotranspiration and establishes these methods at the top of the LID treatment hierarchy. This Provision also acknowledges the challenges, both institutional and technical, to providing these LID methods at all Regulated Projects. There

are certainly situations where biotreatment is a valid LID treatment measure and this Provision allows Permittees the flexibility to make this determination so that Regulated Projects are not forced to include measures inappropriate or impracticable to the project sites. However, Permittees are required to submit a report within 18 months of the Permit effective date and prior to the required implementation date on the criteria and procedures that Permittees will employ to determine when harvesting and re-use, infiltration, or evapotranspiration is feasible and infeasible at a Regulated Project site. The Permittees are also required to submit a second report two years after implementing the new LID requirements that documents their experience with determining the feasibility and infeasibility of harvesting and reuse, infiltration, and evapotranspiration at Regulated Project sites. This report shall also discuss barriers, including institutional and technical site specific constraints, to implementation of infiltration, harvesting and reuse, or evapotranspiration and proposed strategies for removing these identified barriers.

This Provision specifies minimum specifications for biotreatment systems to be considered as LID treatment and requires Permittees to develop soil media specifications. Because this Provision recognizes green roofs as biotreatment systems for roof runoff, it also requires Permittees to develop minimum specifications for green roofs.

Provision C.3.c.ii. establishes the implementation date for the new LID requirements of Provision C.3.c.i. to be two years after the Permit effective date. Grandfathering language consistent with Provision C.3.b.ii.(1) has been included in this Provision to exempt private development projects (that are far along in their permitting and approval process) and public projects (that are far along in their funding and design) from the requirements of Provision C.3.c.i.

Provision C.3.d (Numeric Sizing Criteria for Stormwater Treatment Systems) lists the hydraulic sizing design criteria that the stormwater treatment systems installed for Regulated Projects must meet. The volume and flow hydraulic design criteria are the same as those required in the current stormwater permits. These criteria ensure that stormwater treatment systems will be designed to treat the optimum amount of relatively smaller-sized runoff-generating storms each year. That is, the treatment systems will be sized to treat the majority of rainfall events generating polluted runoff but will not have to be sized to treat the few very large annual storms as well. For many projects, such large treatment systems become infeasible to incorporate into the projects. Provision C.3.d. also adds a new combined flow and volume hydraulic design criteria to accommodate those situations where a combination approach is deemed most efficient.

Provision C.3.d.iv. defines infiltration devices and establishes limits on the use of stormwater treatment systems that function primarily as infiltration devices. The intent of the Provision is to ensure that the use of infiltration devices, where feasible and safe from the standpoint of structural integrity, must also not cause or contribute to the degradation of groundwater quality at the project sites. This Provision requires infiltration devices to be located a minimum of 10 feet

(measured from the base) above the seasonal high groundwater mark and a minimum of 100 feet horizontally away from any known water supply wells, septic systems, and underground storage tanks with hazardous materials, and other measures to ensure that any potential threat to the beneficial uses of ground water is appropriately evaluated and avoided.

Provision C.3.e (Alternative or In-Lieu Compliance with Provision C.3.c.) recognizes that not all Regulated Projects may be able to install LID treatment systems onsite because of site conditions, such as existing underground utilities, right-of-way constraints, and limited space.

Provision C.3.e.i. In keeping with LID concepts and strategies, we expect new development projects to provide LID treatment onsite and to allocate the appropriate space for these systems because they do not have the site limitations of redevelopment and infill site development in the urban core. However, this Provision does not restrict alternative compliance to redevelopment and infill projects because the Permittees have requested flexibility to make the determination of when alternative compliance is appropriate. Based on the lack of offsite alternative compliance projects installed during the current stormwater permit terms, it seems that having to find offsite projects is already a great disincentive. Therefore, this Provision allows any Regulated Project to provide LID treatment for up to 100% of the required Provision C.3.d. stormwater runoff at an offsite location or pay equivalent in-lieu fees to provide LID treatment at a Regional Project, as long as the offsite and Regional Projects are in the same watershed as the Regulated Project.

For the LID Treatment at an Offsite Location alternative compliance option, offsite projects must be constructed by the end of construction of the Regulated Project. We acknowledge that a longer timeframe may be required to complete construction of offsite projects because of administrative, legal, and/or construction delays. Therefore, up to 3 years additional time is allowed for construction of the offsite project; however, to offset the untreated stormwater runoff from the Regulated Project that occurs while construction of the offsite project is taking place, the offsite project must be sized to treat an additional 10% of the calculated equivalent quantity of both stormwater runoff and pollutant loading for each year that it is delayed. Permittees have commented that for projects that are delayed, requiring treatment of an additional (10-30)% of stormwater runoff may result in costly re-design of treatment systems. In those cases, payment of in-lieu fees to provide the additional treatment at a Regional Project is a viable alternative.

For the Payment of In-Lieu Fees to a Regional Project alternative compliance option, the Regional Project must be completed within 3 years after the end of construction of the Regulated Project. We acknowledge that a longer timeframe may be required to complete construction of Regional Projects because they may involve a variety of public agencies and stakeholder groups and a longer planning and construction phase. Therefore, the timeline for completion of a Regional Project may be extended, up to 5 years after the completion of the Regulated

Project, with prior Water Board Executive Officer approval. Executive Officer approval will be granted contingent upon a demonstration of good faith efforts to implement the Regional Project, such as having funds encumbered and applying for the appropriate regulatory permits.

Provision C.3.e.ii. (Special Projects) When considered at the watershed scale, certain types of smart growth, high density, and transit-oriented development can either reduce existing impervious surfaces, or create less “accessory” impervious areas and auto-related pollutant impacts. Incentive LID treatment reduction credits approved by the Water Board may be applied to these types of Special Projects.

This Provision requires that by December 1, 2010, Permittees shall submit a proposal to the Water Board containing the following information:

- Identification of the types of projects proposed for consideration of LID treatment reduction credits and an estimate of the number and cumulative area of potential projects during the remaining term of this permit for each type of project..
- Identification of institutional barriers and/or technical site specific constraints to providing 100% LID treatment onsite that justify the allowance for non-LID treatment measures onsite.
- Specific criteria for each type of Special Project proposed, including size, location, minimum densities, minimum floor area ratios, or other appropriate limitations.
- Identification of specific water quality and environmental benefits provided by these types of projects that justify the allowance for non-LID treatment measures onsite.
- Proposed LID treatment reduction credit for each type of Special Project and justification for the proposed credits. The justification shall include identification and an estimate of the specific water quality benefit provided by each type of Special Project proposed for LID treatment reduction credit.
- Proposed total treatment reduction credit for Special Projects that may be characterized by more than one category and justification for the proposed total credit.

Provision C.3.f (Alternative Certification of Adherence to Numeric Sizing Criteria for Stormwater Treatment Systems) allows Permittees to have a third-party review and certify a Regulated Project’s compliance with the hydraulic design criteria in Provision C.3.d. Some municipalities do not have the staffing resources to perform these technical reviews. The third-party review option addresses this staffing issue. This Provision requires Permittees to make a reasonable effort to ensure that the third-party reviewer has no conflict of interest with regard to the Regulated Project being reviewed. That is, any consultant, contractor or their employees hired to design and/or construct a stormwater treatment system for a Regulated Project can not also be the certifying third party.

Provision C.3.g. (Hydromodification Management, HM) requires that certain new development projects manage increases in stormwater runoff flow and volume so that post-project runoff shall not exceed estimated pre-project runoff rates and durations, where such increased flow and/or volume is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force.

Background for Provision C.3.g. Based on Hydrograph Modification Management Plans prepared by the Permittees, the Water Board adopted hydromodification management (HM) requirements for Alameda Permittees (March 2007), Contra Costa Permittees (July 2006), Fairfield-Suisun Permittees (March 2007), Santa Clara Permittees (July 2005), and San Mateo Permittees (March 2007). Within Provision C.3.g, the major common elements of these HM requirements are restated. Attachments B–F contain the HM requirements as adopted by the Water Board, with some changes to correct minor errors and to provide consistency across the Region. Attachment F contains updated HM requirements for the Santa Clara Permittees. Permittees will continue to implement their adopted HM requirements; where Provision C.3.g. contradicts the Attachments, Provision C.3.g. shall be implemented. Additional requirements and/or options contained in the Attachments, above and beyond what is specified in Provision C.3.g., remain unaltered by Provision C.3.g. In all cases, the HM Standard must be achieved.

The Alameda, Santa Clara and San Mateo Permittees have adapted the Western Washington Hydrology Model⁷⁰ for modeling runoff from development project sites, sizing flow duration control structures, and determining overall compliance of such structures and other HM control structures (HM controls) in controlling runoff from the project sites to manage hydromodification impacts as described in the Permit. The adapted model is called the Bay Area Hydrology Model (BAHM).⁷¹ All Permittees may use the BAHM if its inputs reflect actual conditions at the project site and surrounding area, including receiving water conditions. As Permittees gain experience in designing and operating HM controls, the Programs may make adjustments in the BAHM to improve its function in controlling excess runoff and managing hydromodification impacts. Notification of all such changes shall be given to the Water Board and the public through such mechanism as an electronic email list.

The Contra Costa Permittees have developed sizing charts for the design of flow duration control devices. Attachment C requires the Contra Costa Permittees to conduct a monitoring program to verify the performance of these devices. Following the satisfactory conclusion of this monitoring program, or conclusion of other study(s) that demonstrate devices built according to Attachment C specifications satisfactorily protect streams from excess erosive flows, the Water Board intends to allow the use of the Contra Costa sizing charts, when tailored to local conditions, by other stormwater programs and Permittees. Similarly, any other control strategies or criteria approved by the Board would be made available across the Region. This would be accomplished

⁷⁰ http://www.ecy.wa.gov/programs/wq/stormwater/wwhm_training/wwhm/wwhm_v2/instructions_v2.html

⁷¹ See www.bayareahydrologymodel.org, Resources.

through Permit amendment or in another appropriate manner following appropriate public notification and process.

The Fairfield-Suisun Permittees have developed design procedures, criteria, and sizing factors for infiltration basins and bioretention units. These procedures, criteria, and sizing factors have been through the public review process already, and are not subject to public review at this time. Water Board staff's technical review found that the procedures, criteria, and sizing factors are acceptable in all ways except one: they are based on an allowable low flow rate that exceeds the criteria established in this Permit. Fairfield-Suisun Permittees may choose to change the design criteria and sizing factors to the allowable criterion of 20 percent of the 2-year peak flow, and seek Executive Officer approval of the modified sizing factors. This criterion, which is greater than the criterion allowed for other Bay Area Stormwater Countywide Programs, is based on data collected from Laurel and Ledge wood Creeks and technical analyses of these site-specific data. Following approval by the Executive Officer and notification of the public through such mechanism as an email list-serve, project proponents in the Fairfield-Suisun area may meet the HM Standard by using the Fairfield-Suisun Permittees' design procedures, criteria, and sizing factors for infiltration basins and/or bioretention units.

Attachments B and F allow the Alameda and Santa Clara Permittees to prepare a user guide to be used for evaluating individual receiving waterbodies using detailed methods to assess channel stability and watercourse critical flow. This user guide would reiterate and collate established stream stability assessment methods that have been presented in these Programs' HMPs, which have undergone Water Board staff review and been made available for public review. After the Programs have collated their methods into user guide format, received approval of the user guide from the Executive Officer, and informed the public through such process as an email list-serve, the user guide may be used to guide preparation of technical reports for: implementing the HM standard using in-stream or regional measures; determining whether certain projects are discharging to a watercourse that is less susceptible (from point of discharge to the Bay) to hydromodification (e.g., would have a lower potential for erosion than set forth in this Permit); and/or determining if a watercourse has a higher critical flow and project(s) discharging to it are eligible for an alternative Q_{cp} ⁷² for the purpose of designing on-site or regional measures to control flows draining to these channels (i.e., the actual threshold of erosion-causing critical flow is higher than 10 percent of the 2-year pre-project flow).

The Water Board recognizes that the collective knowledge of management of erosive flows and durations from new and redevelopment is evolving, and that the topics listed below are appropriate topics for further study. Such a study may be initiated by Water Board staff, or the Executive Officer may request that all Bay Region municipal stormwater Permittees jointly conduct investigations as appropriate. Any future

⁷² Q_{cp} is the allowable low flow discharge from a flow control structure on a project site. It is a means of apportioning the critical flow in a stream to individual projects that discharge to that stream, such that cumulative discharges do not exceed the critical flow in the stream.

proposed changes to the Permittees' HM provisions may reflect improved understanding of these issues:

- Potential incremental costs, and benefits to waterways, from controlling a range of flows up to the 35- or 50-year peak flow, versus controlling up to the 10-year peak flow, as required by this Permit;
- The allowable low-flow (also called Qcp and currently specified as 10–20 percent of the pre-project 2-year runoff from the site) from HM controls;
- The effectiveness of self-retaining areas for management of post-project flows and durations; and/or
- The appropriate basis for determining cost-based impracticability of treating stormwater runoff and controlling excess runoff flows and durations.

Within Attachments B-F, this Permit allows for alternative HM compliance when on-site and regional HM controls and in-stream measures are not practicable. Alternative HM compliance includes contributing to or providing mitigation at other new or existing development projects that are not otherwise required by this Permit or other regulatory requirements to have HM controls. The Permit provides flexibility in the type, location, and timing of the mitigation measure. The Board recognizes that handling mitigation funds may be difficult for some municipalities because of administrative and legal constraints. The Board intends to allow flexibility for project proponents and/or Permittees to develop new or retrofit stormwater treatment or HM control projects within a broad area and reasonable time frame. Toward the end of the Permit term, the Board will review alternative projects and determine whether the impracticability criteria and options should be broadened or made narrower.

Provision C.3.g.i. defines the subset of Regulated Projects that must install hydromodification controls (HM controls). This subset, called HM Projects, are Regulated Projects that create and/or replace one acre or more of impervious surface and are not specifically excluded within Attachments B–F of the Permit. Within these Attachments, the Permittees have identified areas where the potential for single-project and/or cumulative development impacts to creeks is minimal, and thus HM controls are not required. Such areas include creeks that are concrete-lined or significantly hardened (e.g., with concrete) from point of discharge and continuously downstream to their outfall into San Francisco Bay; underground storm drains discharging to the Bay; and construction of infill projects in highly developed watersheds.⁷³

Provision C.3.g.ii. establishes the standard hydromodification controls must meet. The HM Standard is based largely on the standards proposed by Permittees in their Hydrograph Modification Management Plans. The method for calculating post-project runoff in regards to HM controls is standard practice in Washington State and is equally applicable in California.

⁷³ Within the context of Provision C.3.g., “highly developed watersheds; refer to catchments or sub-catchments that are 65 percent impervious or more.

Provision C.3.g.iii. identifies and defines three methods of hydromodification management.

Provision C.3.g.iv. sets forth the information on hydromodification management to be submitted in the Permittees' Annual Reports.

Provision C.3.g.v. requires the Vallejo Permittees to develop a Hydromodification Management Plan (HMP), because the Vallejo Permittees have not been required to address HM impacts to date. Vallejo's current permit was issued by USEPA and does not require the Vallejo Permittees' to develop an HMP. The Vallejo Permittees may choose to adopt and implement one or a combination of the approaches in Attachments B–F.

Provision C.3.h (Operation and Maintenance of Stormwater Treatment Systems) establishes permitting requirements to ensure that proper maintenance for the life of the project is provided for all onsite, joint, and offsite stormwater treatment systems installed. The Provision requires Permittees to inspect at least 20% of these systems annually, at least 20% of all vault-based systems annually, and every treatment system at least once every 5 years. Requiring inspection of at least 20% of the total number of treatment and HM controls serves to prevent failed or improperly maintained systems from going undetected until the 5th year. We have the additional requirement to inspect at least 20% of all installed vault-based systems because they require more frequent maintenance and problems arise when the appropriate maintenance schedules are not followed. Also, problems with vault systems may not be as readily identified by the projects' regular maintenance crews. Neither of these inspection frequency requirements interferes with the Permittees' current ability to prioritize their inspections based on factors such as types of maintenance agreements, owner or contractor maintained systems, maintenance history, etc. This Provision also requires the development of a database or equivalent tabular format to track the operation and maintenance inspections and any necessary enforcement actions against Regulated Projects and submittal of Reporting Table C.3.h., which requires standard information that should be collected on each operation and maintenance inspection. We require this type of information to evaluate a Permittee's inspection and enforcement program and to determine compliance with the Permit. Summary data alone without facility-specific inspection findings does not allow us to determine whether Permittees are doing timely follow-up inspections at problematic facilities and taking appropriate enforcement actions.

Stormwater treatment system maintenance has been identified as a critical aspect of addressing urban runoff from Regulated Projects by many prominent urban runoff authorities, including CASQA, which states that "long-term performance of BMPs [stormwater treatment systems] hinges on ongoing and proper maintenance."⁷⁴ USEPA also stresses the importance of BMP [stormwater treatment system] maintenance,

⁷⁴ California Stormwater Quality Association, 2003. Stormwater Best Management Practice Handbook – New Development and Redevelopment, p. 6-1.

stating that “Lack of maintenance often limits the effectiveness of stormwater structure controls such as detention/retention basins and infiltration devices.”⁷⁵

Provision C.3.i. (Required Site Design Measures for Small Project and Detached Single-Family Homes Projects) introduces new requirements on single-family home projects that create and/or replace 2500 square feet or more of impervious surface and small development projects that create and/or replace > 2500 ft² to <10,000 ft² impervious surface (collectively over the entire project). A detached single-family home project is defined as the building of one single new house or the addition and/or replacement of impervious surface to one single existing house, which is not part of a larger plan of development.

This Provision requires these projects to select and implement one or more stormwater site design measures from a list of six. These site design measures are basic methods to reduce the amount and flowrate of stormwater runoff from projects and provide some pollutant removal treatment of the runoff that does leave the projects. Under this Provision, only projects that already require approvals and/or permits under the Permittees’ current planning, building, or other comparable authority are regulated. Hence this Provision does not require Permittees to regulate small development and single-family home projects that would not otherwise be regulated under the Permittees’ current ordinances or authorities. Water Board staff recognizes that the stormwater runoff pollutant and volume contribution from each one of these projects may be small; however, the cumulative impacts could be significant. This Provision serves to address some of these cumulative impacts in a simple way that will not be too administratively burdensome on the Permittees. To assist these small development and single-family home projects, this Provision also requires the Permittees to develop standard specifications for lot-scale site design and treatment measures.

⁷⁵ USEPA. 1992. *Guidance Manual for the Preparation of Part II of the NPDES Permit Application for Discharges from Municipal Separate Storm Sewer Systems*. EPA 833-B-92-002.

C.4. Industrial and Commercial Site Controls

Legal Authority

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, D, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C) requires, “A description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system.”

Specific Provision C.4. Requirements

Provision C.4.a (Legal Authority for Effective Site Management)

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that each Permittee must demonstrate that it can control “through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity.” This section also describes requirements for effective follow-up and resolution of actual or threatened discharges of either polluted non-stormwater or polluted stormwater runoff from industrial/commercial sites.

Provision C.4.b (Inspection Plan)

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C)(1) provides that Permittees must “identify priorities and procedures for inspections and establishing and implementing control measures for such discharges.” The Permit requires Permittees to implement an industrial and commercial site controls program to reduce pollutants in runoff from all industrial and commercial sites/sources.

Provision C.4.b.ii.(1) (Commercial and Industrial Source Identification)

Federal NPDES regulation 40 CFR 122.26(d)(2)(ii) provides that Permittees “Provide an inventory, organized by watershed of the name and address, and a description (such as SIC codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, storm water associated with industrial activity.”

USEPA requires “measures to reduce pollutants in storm water discharges to municipal separate storm sewers from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of

1986 (SARA).”⁷⁶ USEPA “also requires the municipal storm sewer Permittees to describe a program to address industrial dischargers that are covered under the municipal storm sewer permit.”⁷⁷ To more closely follow USEPA’s guidance, this Permit also includes operating and closed landfills, and hazardous waste treatment, disposal, storage and recovery facilities.

The Permit requires Permittees to identify various industrial sites and sources subject to the General Industrial Permit or other individual NPDES permit. USEPA supports the municipalities regulating industrial sites and sources that are already covered by an NPDES permit:

Municipal operators of large and medium municipal separate storm sewer systems are responsible for obtaining system-wide or area permits for their system’s discharges. These permits are expected to require that controls be placed on storm water discharges associated with industrial activity which discharge through the municipal system. It is anticipated that general or individual permits covering industrial storm water discharges to these municipal separate storm sewer systems will require industries to comply with the terms of the permit issued to the municipality, as well as other terms specific to the Permittee.⁷⁸

And:

Although today’s rule will require industrial discharges through municipal storm sewers to be covered by separate permit, USEPA still believes that municipal operators of large and medium municipal systems have an important role in source identification and the development of pollutant controls for industries that discharge storm water through municipal separate storm sewer systems is appropriate. Under the CWA, large and medium municipalities are responsible for reducing pollutants in discharges from municipal separate storm sewers to the maximum extent practicable. Because storm water from industrial facilities may be a major contributor of pollutants to municipal separate storm sewer systems, municipalities are obligated to develop controls for storm water discharges associated with industrial activity through their system in their storm water management program.⁷⁹

Provision C.4.b.ii.(5) (Inspection Frequency)

USEPA guidance⁸⁰ says, “management programs should address minimum frequency for routine inspections.” The USEPA Fact Sheet—Visual Inspection⁸¹ says, “To be effective, inspections must be carried out routinely.”

⁷⁶ *Federal Register*. Vol. 55, No. 222, Friday, November 16, 1990. Rules and Regulations. P. 48056.

⁷⁷ *Ibid*.

⁷⁸ *Federal Register*. Vol. 55, No. 222, Friday, November 16, 1990, Rules and Regulations. P. 48006.

⁷⁹ *Ibid*. P. 48000

⁸⁰ USEPA. 1992. Guidance 833-8-92-002, section 6.3.3.4 “Inspection and Monitoring”.

⁸¹ USEPA. 1999. 832-F-99-046, “Storm Water Management Fact Sheet – Visual Inspection”.

Provision C.4.c (Enforcement Response Plan) requires the Permittees to establish an Enforcement Response Plan (ERP) that ensures timely response to actual or potential stormwater pollution problems discovered in the course of industrial/commercial stormwater inspections. The ERP also provides for progressive enforcement of violations of ordinances and/or other legal authorities. The ERP will provide guidance on the appropriate use of the various enforcement tools, such as verbal and written notices of violation, when to issue a citations, and require cleanup requirements, cost recovery, and pursue administrative or and criminal penalties. All violations must be corrected in a timely manner with the goal of correcting them before the next rain event but no longer than 10 business days after the violations are discovered.

Provision C.4.d (Staff Training) section of the Permit requires the Permittees to conduct annual staff trainings for inspectors. Trainings are necessary to keep inspectors current on enforcement policies and current MEP BMPs for industrial and commercial stormwater runoff discharges.

C.5. Illicit Discharge Detection and Elimination

Legal Authority

The following legal authority applies to section C.5:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, D, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulations 40 CFR 122.26(d)(1)(iii)(B)(1) provides that the Permittee shall include in their application, “the location of known municipal storm sewer system outfalls discharging to waters of the United States.”

Federal NPDES regulations 40 CFR 122.26(d)(1)(iii)(B)(5) provides that the Permittee shall include in their application, “The location of major structural controls for storm water discharge (retention basins, detention basins, major infiltration devices, etc.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B) provides that the Permittee shall have, “adequate legal authority to prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B) provides that the Permittee shall, “Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B) requires, “shall be based on a description of a program, including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) requires, “a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal storm sewer system.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(2) requires, “a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3) requires, “procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(4) requires, “a description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(5) requires, “a description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(7) requires, “a description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary.”

Fact Sheet Findings in Support of Provision C.5

- C.5-1** Illicit and inadvertent connections to MS4 systems result in the discharge of waste and chemical pollutants to receiving waters. Every Permittee must have the ability to discover, track, and clean up stormwater pollution discharges by illicit connections and other illegal discharges to the MS4 system.
- C.5-2** Illicit discharges to the storm drain system can be detected in several ways. Permittee staff can detect discharges during their course of other tasks, and business owners and other aware citizens can observe and report suspect discharges. The Permittee must have a direct means for these reports of suspected polluted discharges to receive adequate documentation, tracking, and response through problem resolution.

Specific Provision C.5 Requirements

Provision C.5.a (Legal Authority) requires each Permittee have adequate legal authority to effectuate cessation, abatement, and/or clean up of non-exempt non-stormwater discharges per Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B). Illicit and inadvertent connections to MS4 systems result in the discharge of waste and chemical pollutants to receiving waters. Every Permittee must have the ability to discover, track, and clean up stormwater pollution discharges by illicit connections and other illegal discharges to the MS4 system.

Provision C.5.b (ERP) requires Permittees to establish an ERP that ensures timely response to illicit discharges and connections to the MS4 and provides progressive enforcement of violations of ordinances and/or other legal authorities. This section also requires Permittees to establish criteria for triggering follow-up investigations. Additional language has been added to this section to clarify the minimum level of effort and time frames for follow-up investigations when violations are discovered. Timely investigation and follow up when action levels are exceeded is necessary to identify sources of illicit discharges, especially since many of the discharges are transitory. The requirements for all violations to be corrected before the next rain event but no longer than 10 business days when there is evidence of illegal non-stormwater discharge, dumping, or illicit connections having reached municipal storm drains is necessary to ensure timely response by Permittees.

Provision C.5.c (Spill and Dumping Response, Complaint Response, and Frequency of Inspections) Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(4) requires, “a description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.” This Provision of the Permit requires the Permittees to establish and maintain a central point of contact including phone numbers for spill and complaint reporting. Reports from the public are an essential tool in discovering and investigating illicit discharge activities. Maintaining contact points will help ensure that there is effective reporting to assist with the discovery of prohibited discharges. Each Permittee must have a direct means for these reports of suspected polluted discharges to receive adequate documentation, tracking, and response through problem resolution.

Provision C.5.d (Control of Mobile Sources) requires each Permittee to develop and implement a program to reduce the discharge of pollutants from mobile businesses. The purpose of this section is to establish oversight and control of pollutants associated with mobile business sources to the MEP.

Provision C.5.e (Collection System Screening and MS4 Map Availability) Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3) requires, “procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.” This Provision of the Permit requires the Permittees to conduct follow up investigations and inspect portions of the MS4 for illicit discharges and connections. Permittees shall implement a program to actively seek and eliminate illicit connections and discharges during their routine collection system screening and during screening surveys at strategic check points. Additional wording has been added to this section to clarify and ensure that all appropriate municipal personnel are used in the program to observe and report these illicit discharges and connections when they are working the system.

This section also requires the Permittees to develop or obtain a map of their entire MS4 system and drainages within their jurisdictions and provide the map to the public for review. As part of the permit application process federal NPDES regulations 40 CFR 122.26(d)(1)(iii)(B)(1) and 40 CFR 122.26(d)(1)(iii)(B)(5) specify that dischargers must identify the location of any major outfall that discharges to waters of the United States, as well as the location of major structural controls for stormwater discharges. A major outfall is any outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than a circular pipe which is associated with a drainage area of more than 50 acres) or; for areas zoned for industrial activities, any pipe with a diameter of 12 inches or more or its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more). The permitting agency may not process a permit until the applicant has fully complied with the application requirements.⁸² If, at the time of application, the information is unavailable, the Permit must require implementation of a program to meet the application requirements.⁸³ The requirement in this Provision of the Permit for

⁸² 40 CFR 124.3 (applicable to state programs, see section 123.25).

⁸³ 40 CFR. 122.26(d)(1)(iv)(E).

Permittees to prepare maps of the MS4 system will help ensure that Permittees comply with federal NPDES permit application requirements that are more than 10 years old.

Provision C.5.f (Tracking and Case Follow-up) section of the Permit requires Permittees to track and monitor follow-up for all incidents and discharges reported to the complaint/spill response system that could pose a threat to water quality. This requirement is included so Permittees can demonstrate compliance with the ERP requirements of Section C.5.b and to ensure that illicit discharge reports receive adequate follow up through to resolution.

C.6. Construction Site Control

Legal Authority

The following legal authority applies to section C.6:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, D, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D) requires, “A description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(1) requires, “A description of procedures for site planning which incorporate consideration of potential water quality impacts.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(2) requires, “A description of requirements for nonstructural and structural best management practices.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(3) requires, “A description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(4) requires, “A description of appropriate educational and training measures for construction site operators.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that each Permittee must demonstrate that it can control, “through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity.”

Federal NPDES regulation 40 CFR 122.26(b)(14) provides that, “The following categories of facilities are considered to be engaging in ‘industrial activity’ for the purposes of this subsection: [...] (x) Construction activity including cleaning, grading and excavation activities [...].”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to, “control all pollutants or pollutant parameters (either conventional, non-conventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute

to an excursion above any State water quality standard, including State narrative criteria for water quality.”

Fact Sheet Findings in Support of Provision C.6.

- C.6-1** Vegetation clearing, mass grading, lot leveling, and excavation expose soil to erosion processes and increase the potential for sediment mobilization, runoff and deposition in receiving waters. Construction sites without adequate BMP implementation result in sediment runoff rates that greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters.
- C.6-2** Excess sediment can cloud the water, reducing the amount of sunlight reaching aquatic plants, clog fish gills, smother aquatic habitat and spawning areas, and impede navigation in our waterways. Sediment also transports other pollutants such as nutrients, metals, and oils and grease. Permittees are on-site at local construction sites for grading and building permit inspections, and also have in many cases dedicated construction stormwater inspectors with training in verifying that effective BMPs are in place and maintained. Permittees also have effective tools available to achieve compliance with adequate erosion control, such as *stop work* orders and citations.
- C.6-3** Mobilized sediment from construction sites can flow into receiving waters. According to the 2004 National Water Quality Inventory⁸⁴, States and Tribes report that sediment is one of the top 10 causes of impairment of assessed rivers and streams, next to pathogens, habitat alteration, organic enrichment or oxygen depletion, nutrients, metals, etc.. Sediment impairs 35,177 river and stream miles (14% of the impaired river and stream miles). Sources of sedimentation include agriculture, urban runoff, construction, and forestry. Sediment runoff rates from construction sites, however, are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades.⁸⁵

Specific Provision C.6 Requirements

Provision C.6.a. Legal Authority for Effective Site Management. Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) requires that each Permittee demonstrate that it can control “through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity.” This section of the Permit requires each Permittee to have the

⁸⁴ http://www.epa.gov/owow/305b/2004report/2004_305Breport.pdf

⁸⁵ USEPA. December 2005. *Stormwater Phase II Final Rule Fact Sheet Series – Construction Site Runoff Control Minimum Control Measure*. EPA 833-F-00-008. Fact Sheet 2.6.

authority to require year-round, seasonally and phase appropriate effective erosion control, run-on and runoff control, sediment control, active treatment systems, good site management, and non stormwater management through all phases of site grading, building, and finishing of lots. All Permittees should already have this authority. Permittees shall certify adequacy of their respective legal authority in the 2010 Annual Report.

Inspectors should have the authority to take immediate enforcement actions when appropriate. Immediate enforcement will get the construction site's owner/operator to quickly implement corrections to violations, thereby minimizing and preventing threats to water quality. When inspectors are unable to take immediate enforcement actions, the threat to water quality continues until an enforcement incentive is issued to correct the violation. In its Phase II Compliance Assistance Guidance, USEPA says that, "Inspections give the MS4 operator an opportunity to provide additional guidance and education, issue warnings, or assess penalties."⁸⁶ To issue warnings and assess penalties during inspections, inspectors must have the legal authority to conduct enforcement.

Provision C.6.b. Enforcement Response Plan (ERP). This section requires each Permittee to develop and implement an escalating enforcement process that serves as reference for inspection staff to take consistent actions to achieve timely and effective corrective compliance from all public and private construction site owners/operators. Under this section, each Permittee develops its own unique ERP tailored for the specific jurisdiction; but all ERPs must make it a goal to correct all violations before the next rain event but no longer than 10 business days after the violations are discovered. In a few cases, such as slope inaccessibility, it may require longer than 10 days before crews can safely access the eroded area. The Permittees' tracking data need to provide a rationale for the longer compliance timeframe.

Water Board staff has noted deficiencies in the Permittees' enforcement procedures and implementation during inspections. The most common issues found were that enforcement was not firm and appropriate to correct the violation, and that repeat violations did not result in escalated enforcement procedures. USEPA supports enforcement of ordinances and permits at construction sites stating, "Effective inspection and enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations."⁸⁷ In addition, USEPA expects permits issued to municipalities to address "weak inspection and enforcement."⁸⁸ For these reasons, the enforcement requirements in this section have been established, while providing sufficient flexibility for each Permittee's unique stormwater program.

Provision C.6.c. Best Management Practices Categories. This section requires all Permittees to require all construction sites to have year-round seasonally appropriate effective Best Management Practices (BMPs) in the following six categories: (1)

⁸⁶ USEPA. 2000. 833-R-00-002, Storm Water Phase II Compliance Assistance Guide, P.4-31

⁸⁷ USEPA. 1992. Guidance 833-8-92-002. Section 6.3.2.3.

⁸⁸ *Federal Register*. Vol. 55, No. 222, Friday, November 16, 1990. Rules and Regulations. p. 48058.

erosion control, (2) run-on and runoff control, (3) sediment control, (4) active treatment systems, (5) good site management, and (6) non stormwater management. These BMP categories are listed in the State General NPDES Permit for Stormwater Discharges Associated with Construction Activities (General Construction Permit). The Water Board staff decided it was too prescriptive and inappropriate to require a specific set of BMPs that are to be applicable to all sites. Every site is different with regards to terrain, soil type, soil disturbance, and proximity to a waterbody. The General Construction Permit recognizes these different factors and requires site specific BMPs through the Storm Water Pollution Prevention Plan that addresses the six specified BMP categories. This Permit allows Permittees the flexibility to determine if the BMPs for each construction site are effective and appropriate. This Permit also allows the Permittees and the project proponents the necessary flexibility to make immediate decisions on appropriate, cutting-edge technology to prevent the discharge of construction pollutants into stormdrains, waterways, and right-of-ways. Appropriate BMPs for the different site conditions can be found in different handbooks and manuals. Therefore, this Permit is consistent with the General Construction Permit in its requirements for BMPs in the six specified categories.

Vegetation clearing, mass grading, lot leveling, and excavation expose soil to erosion processes and increase the potential for sediment mobilization, runoff and deposition in receiving waters. Construction sites without adequate BMP implementation result in sediment runoff rates that greatly exceed natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. This can even occur in conjunction with unexpected rain events during the so-called *dry-season*. Although rare, significant rains can occur in the San Francisco Bay Region during the dry season. Therefore, Permittees should ensure that construction sites have materials on hand for rapid rain response during the dry season.

Normally, stormwater restrictions on grading should be implemented during the wet season from October 1st through April 30th. Section C.6.c.ii.(1).d of the Permit requires, “project proponents to minimize grading during the wet season and scheduling of grading with seasonal dry weather periods to the extent feasible.” If grading does occur during the wet season, Permittees shall require project proponents to (1) implement additional BMPs as necessary, (2) keep supplies available for rapid response to storm events, and (3) minimize wet-season, exposed, and graded areas to the absolute minimum necessary.

Slope stabilization is necessary on all active and inactive slopes during rain events regardless of the season, except in areas implementing advanced treatment. Slope stabilization is also required on inactive slopes throughout the rainy season. These requirements are needed because unstabilized slopes at construction sites are significant sources of erosion and sediment discharges during rainstorms. “Steep slopes are the most highly erodible surface of a construction site, and require special attention.”⁸⁹ USEPA emphasizes the importance of slope stabilization when it states, “slope length

⁸⁹ Schueler, T., and H. Holland. 2000. *Muddy Water In—Muddy Water Out?* The Practice of Watershed Protection. p. 6.

and steepness are key influences on both the volume and velocity of surface runoff. Long slopes deliver more runoff to the base of slopes and steep slopes increase runoff velocity; both conditions enhance the potential for erosion to occur.”⁹⁰ In lieu of vegetation preservation or replanting, soil stabilization is the most effective measure in preventing erosion on slopes. Research has shown that effective soil stabilization can reduce sediment discharge concentrations up to six times, as compared to soils without stabilization.⁹¹ Slope stabilization at construction sites for erosion control is already the consensus among the regulatory community and is found throughout construction BMP manuals and permits. For these reasons, Permittees must ensure that slope stabilization is implemented on sites, as appropriate.

It is also necessary that Permittees ensure that construction sites are revegetated as early as feasible. Implementation of revegetation reduces the threat of polluted stormwater discharges from construction sites. Construction sites should permanently stabilize disturbed soils with vegetation at the conclusion of each phase of construction.⁹² A survey of grading and clearing programs found one-third of the programs without a time limit for permanent revegetation, “thereby increasing the chances for soil erosion to occur.”⁹³ USEPA states “the establishment and maintenance of vegetation are the most important factors to minimizing erosion during development.”⁹⁴

To ensure the MEP standard and water quality standards are met, advanced treatment systems may be necessary at some construction sites. In requiring the implementation of advanced treatment for sediment at construction sites, Permittees should consider the site’s threat to water quality. In evaluating the threat to water quality, the following factors shall be considered: (1) soil erosion potential; (2) the site’s slopes; (3) project size and type; (4) sensitivity of receiving waterbodies; (5) proximity to receiving waterbodies; (6) non-stormwater discharges; and (7) any other relevant factors. Advanced treatment is a treatment system that employs chemical coagulation, chemical flocculation, or electro coagulation in order to reduce turbidity caused by fine suspended sediment.⁹⁵ Advanced treatment consists of a three part treatment train of coagulation, sedimentation, and polishing filtration. Advanced treatment has been effectively implemented extensively in the other states and in the Central Valley Region of California.⁹⁶ In addition, Water Board’s inspectors have observed advanced treatment being effectively implemented at both large sites greater than 100 acres, and at small, 5-acre sites. Advanced treatment is often necessary for Permittees to ensure that discharges from construction sites are not causing or contributing to a violation of water quality standards.

⁹⁰ USEPA. 1990. *Sediment and Erosion Control: An Inventory of Current Practices*. p. II-1.

⁹¹ Schueler, T., and H. Holland. 2000. “Muddy Water In—Muddy Water Out?” *The Practice of Watershed Protection*. p. 5.

⁹² Ibid.

⁹³ Ibid. p. 11.

⁹⁴ USEPA. 1990. *Sediment and Erosion Control: An Inventory of Current Practices*. p. II-1.

⁹⁵ SWCRB. September 2, 2009. *NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities – Order No. 2009-0009-DWQ*.

⁹⁶ SWCRB. 2004. Conference on Advanced Treatment at Construction Sites.

Provision C.6.d. Plan Approval Process. This section of the Permit requires the Permittees to review project proponents' stormwater management plans for compliance with local regulations, policies, and procedures. USEPA states that it is often easier and more effective to incorporate stormwater quality controls during the site plan review process or earlier.⁹⁷ In the Phase I stormwater regulations, USEPA states that a primary control technique is good site planning.⁹⁸ USEPA goes on to say that the most efficient controls result when a comprehensive stormwater management system is in place.⁹⁹ To determine if a construction site is in compliance with construction and grading ordinances and permits, USEPA states that the "MS4 operator should review the site plans submitted by the construction site operator before ground is broken."¹⁰⁰ Site plan review aids in compliance and enforcement efforts since it alerts the "MS4 operator early in the process to the planned use or non-use of proper BMPs and provides a way to track new construction activities."¹⁰¹

Provision C.6.e. (Inspections) The Water Board allows flexibility on the exact legal authority language, ERP, and BMPs required on a site. This section of the Permit pulls together the accountability of the whole Provision through regular inspections, consistent enforcement, and meaningful tracking. These three elements will help ensure that effective construction pollutant controls are in place in order to minimize construction polluted runoff to the stormdrain and waterbodies.

Currently, Annual Reports show that some Permittees provide no information on its construction inspection and enforcement programs; some Permittees only provide information on pre rainy season inspections; another group of Permittees conduct inspections through December and provide just the date each site was inspected; yet another group of Permittees provides a very brief summary of their respective overall inspection program; and there is a small group of Permittees who report meaningful inspection and enforcement information. Inspections of construction sites by Water Board staff have noted deficiencies in stormwater inspections and enforcement. Therefore, this section clearly identifies the level of effort necessary by all Permittees to minimize construction pollutant runoff into stormdrains and ultimately, waterbodies.

This section requires monthly inspections during the wet season of all construction sites disturbing one or more acre of land and at all high priority sites as determined by the Permittee or the Water Board as significant threats to water quality. Inspections shall focus on the adequacy and effectiveness of the site specific BMPs implemented for the six BMP categories. Permittees shall implement its ERP and require timely corrections of all actual and potential problems observed. All violations must be corrected in a timely manner with the goal of correcting them before the next rain event but no longer

⁹⁷ USEPA. 2000. *Storm Water Phase II Compliance Assistance Guide*. EPA 833-R-00-002. Section 6.3.2.1.

⁹⁸ *Federal Register*. Vol. 55, No. 222, Friday, November 16, 1990. Rules and Regulations. p. 48034.

⁹⁹ *Ibid*.

¹⁰⁰ USEPA. 2000. *Storm Water Phase II Compliance Assistance Guide*. EPA 833-R-00-002. Section 4.6.2.4, pp. 4-30.

¹⁰¹ *Ibid*. pp. 4-31.

than 10 business days after the violations are discovered. All inspections shall be recorded on a written or electronic inspection form, and also tracked in an electronic database or tabular format. The tracked information provides meaningful data for evaluating compliance. An example tabular format is included as Table 6 – Construction Inspection Data. Submittal of this Table is not required in each Annual Report but encouraged. Each Permittee will need to use the information in the electronic database or tabular format to compile its Annual Reports. The Executive Officer may require that the tracked information be submitted electronically or in a tabular format. When required, Permittees shall submit that data within 10-working days of the requirement. The recommended submittal format is in Table 6 – Construction Inspection Data.

Provision C.6.f. Staff Training. This section of the Permit requires Permittees to conduct annual staff trainings for municipal staff. These trainings have been found to be extremely effective means to educate inspectors and to inform them of any changes to local ordinances and state laws. Trainings provide valuable opportunity for Permittees to network and share strategies used for effective enforcement and management of erosion control practices.

Table 6 – Construction Inspection Data

Facility/Site Inspected	Inspection Date	Weather During Inspection	Inches of Rain Since Last Inspection	Enforcement Response Level	Problem(s) Observed							Specific Problem(s)	Resolution			Comments/ Rationale for Longer Compliance Time
					Erosion Control	Run-on and Runoff Control	Sediment Control	Active Treatment System	Good Site Management	Non Stormwater Management	Illicit Discharge		Problems Fixed	Need More Time	Escalate Enforcement	
Panoramic Views	9/30/08	Dry	0	Written Notice			x					Driveway not stabilized				
Panoramic Views	10/15/08	Dry	0.5										x			50' of driveway rocked.
Panoramic Views	11/15/08	Rain	3	Stop Work	x		x					Uncovered graded lots eroding; Sediment entering a stormdrain that didn't have adequate protection.				
Panoramic Views	11/15/08	Drizzling	0.25										x			Lots blanketed. Storm drains pumped. Street cleaned.
Panoramic Views	12/1/08	Dry	4	Verbal Warning					x			Porta potty next to stormdrain.	x			Porta potty moved away from stormdrain.
Panoramic Views	1/15/08	Rain	3.25	Written Warning	x						x	Fiber rolls need maintenance; Tire wash water flowing into street				
Panoramic Views	1/25/09	Dry	0										x			Fiber rolls replaced.

Facility/Site Inspected	Inspection Date	Weather During Inspection	Inches of Rain Since Last Inspection	Enforcement Response Level	Problem(s) Observed							Specific Problem(s)	Resolution			Comments/ Rationale for Longer Compliance Time	
					Erosion Control	Run-on and Runoff Control	Sediment Control	Active Treatment System	Good Site Management	Non Stormwater Management	Illicit Discharge		Problems Fixed	Need More Time	Escalate Enforcement		
Panoramic Views	2/28/09	Rain	2.4	Stop Work	x		x						Slope erosion control failed. Fiber rolls at the bottom of the hill flattened. Sediment laden discharge skipping protected stormdrains and entering unprotected stormdrains.				
Panoramic Views	2/28/09	Rain	0.1											x		Fiber rolls replaced. Silt fences added. More stormdrains protected. Streets cleaned. Slope too soggy to access.	
Panoramic Views	3/15/09	Dry	1	Citation with Fine					x		x		Paint brush washing not designated	x			Street and storm drains cleaned. Slopes blanketed.
Panoramic Views	4/1/09	Dry	0.5	Citation with Fine							x		Concrete washout overflowed; Evidence of illicit discharge				
Panoramic Views	4/15/09	Dry	0											x			Concrete washout replaced; Storm drain and line cleaned.

C.7. Public Information and Outreach

Legal Authority

The following legal authority applies to section C.7:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(6) requires, “A description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(5) requires , “a description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(6) requires, “A description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.”

Fact Sheet Finding in Support of Provision C.7.

- C.7-1** An informed and knowledgeable community is critical to the success of a stormwater program since it helps ensure greater support for the program as the public gains a greater understanding of stormwater pollution issues.
- C.7-2** An informed community also ensures greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.
- C.7-3** The public education programs should use a mix of appropriate local strategies to address the viewpoints and concerns of a variety of audiences and communities, including minority and disadvantaged communities, as well as children.¹⁰²

¹⁰² USEPA. 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

- C.7-4** Target audiences should include (1) government agencies and official to achieve better communication, consistency, collaboration, and coordination at the federal, state, and local levels and (2) K-12/Youth Groups.¹⁰³
- C.7-5** Citizen involvement events should make every effort to reach out and engage all economic and ethnic groups.¹⁰⁴

Specific Provision C.7 Requirements

Provision C.7.a. Storm Drain Inlet Marking. Storm drain inlet marking is a long-established program of outreach to the public on the nature of the storm drain system, providing the information that the storm drain system connects directly to creeks and the Bay and does not receive treatment. Past public awareness surveys have demonstrated that this BMP has achieved significant impact in raising awareness in the general public and meets the MEP standard as a required action. Therefore, it is important to set a goal of ensuring that all municipally-maintained inlets are legible labeled with a no dumping message. If storm drain marking can be conducted as a volunteer activity, it has additional public involvement value.

Provision C.7.b. Advertising Campaigns. Use of various electronic and/or print media on trash/litter in waterways and pesticides. Advertising campaigns are long-established outreach management practices. Specifically, the Bay Area Management Agencies Association (BASMAA) already implements an advertising campaign on behalf of the Permittees. While the Permittees have been successful at reaching certain goals for its Public Information/Participation programs, it must continue to increase public awareness of specific stormwater issues. This Permit also requires a pre-campaign survey and a post-campaign survey. These two surveys will help identify and quantify the audiences' knowledge, trends, and attitudes and/or practices; and to measure the overall population awareness of the messages and behavioral changes.

Provision C.7.c. Media Relations. Public service media time is available and allows the Permittees to leverage expensive media purchases to achieve broader outreach goals.

Provision C.7.d. Stormwater Point of Contact. As the public has become more aware, citizens are more frequently calling their local jurisdictions to report spills and other polluting behavior impacting stormwater runoff and causing non-stormwater prohibited discharges. Permittees are required to have a centralized, easily accessible point of contact both for citizen reports and to coordinate reports of problems identified by Permittee staff, permitting follow-up and pollution cleanup or prevention. Often the follow-up, cleanup, and/or prevention provide the opportunity to educate the immediate neighborhood through established public outreach mechanisms such as distributing door hangers in the neighborhood describing the remedy for the problem discovered. Permittees already have existing published stormwater point of contacts.

¹⁰³ State Water Board. 1994. Urban Runoff Technical Advisory Committee Report and Recommendations. Nonpoint Source Management Program.

¹⁰⁴ USEPA. 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

Provision C.7.e. Public Outreach Events. Staffing tables or booths at fairs, street fairs or other community events are a long-established outreach mechanism employed by Permittees to reach large numbers of citizens with stormwater pollution prevention information in an efficient and convenient manner. These have been ongoing in the Region for several municipal stormwater permit cycles and are MEP outreach actions. Permittees shall continue with such outreach events utilizing appropriate outreach materials, such as printed materials, newsletter/journal articles, and videos. Permittees shall also utilize existing community outreach events such as the Bringing Back the Natives Garden Tour.

Provision C.7.f. Watershed Stewardship Collaborative Efforts. Watershed and Creek groups are comprised of active citizens, but they often need support from the local jurisdiction and certainly need to coordinate actions with Permittees such as flood districts and cities.

Provision C.7.g. Citizen Involvement Events. Citizen involvement and volunteer efforts both accomplish needed creek cleanups and restorations, and serve to raise awareness and provide outreach opportunities. These have been ongoing in the Region for several municipal stormwater permit cycles and are MEP outreach actions.

In previous municipal stormwater permits, Public Information/Participation encompassed both Citizen Involvement Events and Public Outreach Events. Citizen Involvement Events are important because they provide the community opportunities to actively practice being good stewards of our environment. Therefore, this Permit separates out the Public Outreach Events from the Citizen Involvement Events to ensure that citizens in all Bay Area communities are given the opportunity to be involved. In addition, the Permit allows Permittees to claim both Public Outreach and Citizen Involvement credits if the event contains significant elements of both. The combined specified number of events for Public Outreach and Citizen Involvement are very close to current performance standards and/or level of effort for respective Public Information/Participation Programs.

Provision C.7.h. School-Age Children Outreach. Outreach to school children has proven to be a particularly successful program with an enthusiastic audience who are efficient to reach. School children also take the message home to their parents, neighbors, and friends. In addition, they are the next generation of decision makers and consumers.

Provision C.7.i. Outreach to Municipal Officials. It is important for Permittee staff to periodically inform Municipal Officials of the permit requirements and also future planning and resource needs driven by the permit and stormwater regulations.

C.8. Water Quality Monitoring

Legal Authority

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii); CWC section 13377; Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)

Specific Legal Authority: Permittees must conduct a comprehensive monitoring program as required under Federal NPDES regulations 40 CFR 122.48, 40 CFR 122.44(i), 40 CFR 122.26.(d)(1)(iv)(D), and 40 CFR 122.26(d)(2)(ii)-(iv).

Fact Sheet Findings in Support of Provision C.8

C.8-1 In response to questions regarding the type of water quality-based effluent limitations that are most appropriate for NPDES stormwater permits, and because of the nature of stormwater discharges, USEPA established the following approach to stormwater monitoring:

Each storm water permit should include a coordinated and cost-effective monitoring program to gather necessary information to determine the extent to which the permit provides for attainment of applicable water quality standards and to determine the appropriate conditions or limitations for subsequent permits. Such a monitoring program may include ambient monitoring, receiving water assessment, discharge monitoring (as needed), or a combination of monitoring procedures designed to gather necessary information.¹⁰⁵

According to USEPA, the benefits of stormwater runoff monitoring include, but are not limited to, the following:

- Providing a means for evaluating the environmental risk of stormwater discharges by identifying types and amounts of pollutants present;
- Determining the relative potential for stormwater discharges to contribute to water quality impacts or water quality standard violations;
- Identifying potential sources of pollutants; and
- Eliminating or controlling identified sources more specifically through permit conditions.¹⁰⁶

C.8-2 Provision C.8 requires Permittees to conduct water quality monitoring, including monitoring of receiving waters, in accordance with 40 CFR 122.44(i) and 122.48. One purpose of water quality monitoring is to demonstrate the effectiveness of the Permittees' stormwater management

¹⁰⁵ USEPA. 1996. Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits. Sept. 1, 1996. <http://www.epa.gov/npdes/pubs/swpol.pdf>

¹⁰⁶ USEPA. 1992. NPDES Storm Water Sampling Guidance Document. EPA/833-B-92-001.

actions pursuant to this Permit and, accordingly, demonstrate compliance with the conditions of the Permit. Other water quality monitoring objectives under this Permit include:

- Assess the chemical, physical, and biological impacts of urban runoff on receiving waters;
- Characterize stormwater discharges;
- Assess compliance with Total Maximum Daily Loads (TMDLs) and Wasteload Allocations (WLAs) in impaired waterbodies;
- Assess progress toward reducing receiving water concentrations of impairing pollutants;
- Assess compliance with numeric and narrative water quality objectives and standards;
- Identify sources of pollutants;
- Assess stream channel function and condition, as related to urban stormwater discharges;
- Assess the overall health and evaluate long-term trends in receiving water quality; and
- Measure and improve the effectiveness of the Permittees' urban runoff control programs and the Permittees' implemented BMPs.

C.8-3 Monitoring programs are an essential element in the improvement of urban runoff management efforts. Data collected from monitoring programs can be assessed to determine the effectiveness of management programs and practices, which is vital for the success of the iterative approach, also called the “continuous improvement” approach, used to meet the MEP standard. When water quality data indicate that water quality standards or objectives are not being met, particular pollutants, sources, and drainage areas can be identified and targeted for urban runoff management efforts. The iterative process in Provision C.1, Water Quality Standards Exceedances, could potentially be triggered by monitoring results. Ultimately, the results of the monitoring program must be used to focus actions to reduce pollutant loadings to comply with applicable WLAs, and protect and enhance the beneficial uses of the receiving waters in the Permittees' jurisdictions and the San Francisco Bay.

C.8-4 Water quality monitoring requirements in previous permits were less detailed than the requirements in this Permit. Under previous permits, each program could design its own monitoring program, with few permit guidelines. A decision by the California Superior Court¹⁰⁷ regarding two of the programs' permits stated:

Federal law requires that all NPDES permits specify “[r]equired monitoring including type, intervals, and frequency sufficient to yield

¹⁰⁷ San Francisco Baykeeper vs. Regional Water Quality Control Board, San Francisco Bay Region, Consolidated Case No. 500527, filed Nov. 14, 2003.

data which are representative of the monitored activity.” 40 C.F.R. § 122.48(b). Here, there is no monitoring program set forth in the Permit. Instead, an annual Monitoring Program Plan is to be prepared by the dischargers to set forth the monitoring program that will be used to demonstrate the effectiveness of the Stormwater Management Plan. This does not meet the regulatory requirements that a monitoring program be set forth including the types, intervals, and frequencies of the monitoring.

The water quality monitoring requirements in Provision C.8 comply with 40 CFR 122.44(i) and 122.48(b), and the Superior Court decision.

C.8-5 The Water Quality Monitoring Provision is intended to provide answers to five fundamental management questions, outlined below. Monitoring is intended to progress as iterative steps toward ensuring that the Permittees’ can fully answer, through progressive monitoring actions, each of the five management questions:

- Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
- What is the extent and magnitude of the current or potential receiving water problems?
- What is the relative urban runoff contribution to the receiving water problem(s)?
- What are the sources of urban runoff that contribute to receiving water problem(s)?
- Are conditions in receiving waters getting better or worse?

C.8-6 On April 15, 1992, the Water Board adopted Resolution No. 92-043 directing the Executive Officer to implement the Regional Monitoring Program for San Francisco Bay. Subsequent to a public hearing and various meetings, Board staff requested major permit holders in the Region, under authority of CWC section 13267, to report on the water quality of the Estuary. These permit holders, including the Permittees, responded to this request by participating in a collaborative effort through the San Francisco Estuary Institute. This effort has come to be known as the San Francisco Estuary Regional Monitoring Program for Trace Substances (RMP). The RMP involves collection and analysis of data on pollutants and toxicity in water, sediment and biota of the Estuary. The Permittees are required to continue to report on the water quality of the Estuary, as presently required. Compliance with the requirement through participation in the RMP is considered to be adequate compliance.

C.8-7 The Surface Water Ambient Monitoring Program (SWAMP) is a statewide monitoring effort, administered by the State Water Board, designed to assess the conditions of surface waters throughout California. One purpose of SWAMP is to integrate existing water quality monitoring activities of the State Water Board and the Regional Water Quality Control Boards, and to coordinate with other monitoring programs. Provision C.8 contains a

framework, referred to as a regional monitoring collaborative, within which Permittees can elect to work cooperatively with SWAMP to maximize the value and utility of both the Permittees' and SWAMP's monitoring resources.

- C.8-8** In 1998 BASMAA published *Support Document for Development of the Regional Stormwater Monitoring Strategy*,¹⁰⁸ a document describing a possible strategy for coordinating the monitoring activities of BASMAA member agencies. The document states:

BASMAA's member agencies are connected not only by geography but also by an overlapping set of environmental issues and processes and a common regulatory structure. It is only natural that the evolution of their individual stormwater management programs has led toward increasing amounts of information sharing, cooperation, and coordination.

This same concept is found in the optional provision for Permittees to form a regional monitoring collaborative. Such a group is meant to provide efficiencies and economies of scale by performing certain tasks (e.g., planning, contracting, data quality assurance, data management and analysis, and reporting) at the regional level. Further benefits are expected from closer cooperation between this group, the Regional Monitoring Program, and SWAMP.

- C.8-9** This Permit includes monitoring requirements to verify compliance with adopted TMDL WLAs and to provide data needed for TMDL development and/or implementation. This Permit incorporates the TMDLs' WLAs adopted by the Water Board as required under CWA section 303(d).
- C.8-10** SB1070 (California Legislative year 2005/2006) found that there is no single place where the public can go to get a look at the health of local waterbodies. SB1070 also states that all information available to agencies shall be made readily available to the public via the Internet. This Permit requires water quality data to be submitted in a specified format and uploaded to a centralized Internet site so that the public has ready access to the data.

Specific Provision C.8 Requirements

Each of the components of the monitoring provision is necessary to meet the objectives and answer the questions listed in the findings above. Justifications for each monitoring component are discussed below.

Provision C.8.a. Compliance Options. Provision C.8.a. provides Permittees options for obtaining monitoring data through various organizational structures, including use of data obtained by other parties. This is intended to

¹⁰⁸ EcoAnalysis, Inc. & Michael Drennan Assoc., Inc., *Support Document for Development of the Regional Stormwater Monitoring Strategy*, prepared for Bay Area Stormwater Management Agencies Association, March 2, 1998.

- Promote cost savings through economies of scale and elimination of redundant monitoring by various entities;
- Promote consistency in monitoring methods and data quality;
- Simplify reporting; and
- Make data and reports readily publicly available.

In the past, each Stormwater Countywide Program has conducted water quality monitoring on behalf of its member Permittees, and some data were collected by wider collaboratives, such as the Regional Monitoring Program. In this Permit, all the Stormwater Countywide Programs are encouraged to work collaboratively to conduct all or most of the required monitoring and reporting on a region-wide basis. For each monitoring component that is conducted collaboratively, one report would be prepared on behalf of all contributing Permittees; separate reports would not be required from each Program. Cost savings could result also from reduced contract and oversight hours, fewer quality assurance/quality control samples, shared sampling labor costs, and laboratory efficiencies.

Provision C.8.b. San Francisco Estuary Receiving Water Monitoring. The San Francisco Estuary is the ultimate receiving water for most of the urban runoff in this region. For this reason and because of the high value of its beneficial uses, Provision C.8.b requires focused monitoring on the Estuary to continue. Since the mid-1990s, Permittees have caused this monitoring to be conducted by contributing financially and with technical expertise, to the San Francisco Estuary Regional Monitoring Program for Trace Substances. Provision C.8.b requires such monitoring to continue.

Provisions C.8.c. & C.8.e.ii. Status Monitoring and Long-Term Monitoring. Status Monitoring and Long-Term Monitoring serve as surrogates to monitoring the discharge from all major outfalls, of which the Permittees have many. By sampling the sediment and water column in urban creeks, the Permittees can determine where water quality problems are occurring in the creeks, then work to identify which outfalls and land uses are causing or contributing to the problem. In short, Status and Long-Term Monitoring are needed to identify water quality problems and assess the health of streams; they are the first step in identifying sources of pollutants and an important component in evaluating the effectiveness of an urban runoff management program.

Provisions C.8.c.i. and C.8.e.iii. Parameters and Methods

Status & Long-Term parameters and methods reflect current accepted practices, based on the knowledge and experience of personnel responsible for water quality monitoring, including state and Regional SWAMP managers, Permittee representatives, and citizen monitors. Many Status and Long-Term Monitoring parameters are consistent with parameters the Permittees have been monitoring to date. The following parameters are new for some of the Permittees:

- Biological Assessment—to provide site-specific information about the health and diversity of freshwater benthic communities within a specific reach of a creek, using standard procedures developed and/or used by the State Water

Resources Control Board Surface Water Ambient Monitoring Program.¹⁰⁹ It consists of collecting samples of benthic communities and conducting a taxonomic identification to measure community abundance and diversity, which is then compared to a reference creek to assess benthic community health. This monitoring can also provide information on cumulative pollutant exposure/impacts because pollutant impacts to the benthic community accumulate and occur over time.

- Chlorine—to detect a release of potable water or other chlorinated water sources, which are toxic to aquatic life.
- Nutrients—recent monitoring data indicate nutrients, which can increase algal growth and decrease dissolved oxygen concentrations, are present in significant concentrations in Bay area creeks.
- Toxicity and Pollutants in Bedded Sediment—to determine the presence of, and identify, chemicals and compounds that bind to sediment in a creek bed and are toxic to aquatic life.
- Pathogen Indicators—to detect pathogens in waterbodies that could be sources of impairment to recreational uses at or downstream of the sampling location.
- Stream Survey (stream walk and mapping)—to assess the overall physical health of the stream and to gain information potentially useful in interpreting monitoring results.

In consideration of economic impacts to Permittees, the minimum number of Status & Long-Term samples (“Minimum # Sample Sites” columns in Tables 8.1 and 8.3) reflects the Programs’ populations, not waterbody size. Permittees must select exact sample locations that will yield adequate information on the status of their waterbodies; in some cases, additional sampling above the minimum might be necessary.

Provisions C.8.c.ii. and C.8.e.iii. Frequency

Status Monitoring continues to be an annual requirement for the Permittees, except for two much smaller Permittees, Fairfield-Suisun and Vallejo. In considering costs, the frequency of Status Monitoring is established at twice per Permit term for Fairfield-Suisun, and once per Permit term for Vallejo. It is common for Permit terms to be extended through a lengthy Permit reissuance process. Thus, these frequencies are considered the minimum; costs are minimized while data necessary for successful stormwater management are obtained.

Long-Term Monitoring is required every second year (biennially), rather than annually, in order to balance data needs and Permittee costs. To further reduce costs, the Fairfield-Suisun and Vallejo Permittees have no Long-Term Monitoring requirements.

Provisions C.8.c.iii. and C.8.e.ii. Locations

Status Monitoring is to be conducted on a rotating-watershed basis, in similar fashion to the Statewide SWAMP. Provision C.8.c.iii. identifies the major waterbodies, and Permittees are to select which of these waterbodies will be sampled during the Permit

¹⁰⁹ Ode, P.R. 2007. Standard Operating Procedures for Collecting Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California, California State Water Resources Control Board Surface Water Ambient Monitoring Program (SWAMP), as subsequently revised.

term. The exact sample locations within each waterbody are critical in terms of determining the monitoring program's effectiveness. If correctly sited, the stations are expected to be very useful in answering the monitoring program's management questions and meeting its goals. For this reason, Provision C.8.c.iii. requires sample locations to be based on surrounding land use, likelihood of urban runoff impacts, existing data gaps, and similar considerations. This will help maximize the utility of the sample locations, while also providing the Permittees with adequate flexibility to ultimately choose practical Status Monitoring locations.

Long-Term Monitoring is to be conducted at fixed stations, which are intended to be lower reaches of urban creeks. This monitoring is intended to help assess progress toward reducing receiving water concentrations of impairing pollutants, among other purposes. Provision C.8.e.ii. establishes the waterbodies on which to locate fixed stations, and suggests that fixed stations be co-located with SWAMP fixed stations so that Permittees can use SWAMP data to fulfill some of their monitoring requirements. However, Permittees may select alternate locations based on their knowledge of such factors as site access and stream characteristics and provided that similar data types, data quality, and data quantity are collected.

Provision C.8.d. Monitoring Projects. Monitoring Projects are necessary to meet several water quality monitoring objectives under this Permit, including characterize stormwater discharges; identify sources of pollutants; identify new or emerging pollutants; assess stream channel function and condition; and measure and improve the effectiveness of Stormwater Countywide Programs and implemented BMPs. In consideration of economic impacts to Permittees, the number of Monitoring Projects required reflects the Permittees' populations.

Provision C.8.d.i. Stressor/Source Identification

Minimizing sources of pollutants that could impair water quality is a central purpose of urban runoff management programs. Monitoring which enables the Permittees to identify sources of water quality problems aids the Permittees in focusing their management efforts and improving their programs. In turn, the Permittees' programs can abate identified sources, which will improve the quality of urban runoff discharges and receiving waters. This monitoring is needed to address the management question, "What are the sources to urban runoff that contribute to receiving water problems?"

When Status or Long-Term Monitoring results indicate an exceedance of a water quality objective, toxicity threshold, or other "trigger", Permittees must identify the source of the problem and take steps to reduce any pollutants discharged from or through their municipal storm sewer systems. This requirement conforms to the process, outlined in Provision C.1., of complying with the Discharge Prohibition and Receiving Water Limitations. If multiple "triggers" are identified through monitoring, Permittees must focus on the highest priority problems; a cap on the total number of source identification projects conducted within the Permit term is provided to cap Permittees' potential costs.

Provision C.8.d.ii. BMP Effectiveness Investigation

U.S. EPA's stated approach to NPDES stormwater permitting uses BMPs in first-round permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards.¹¹⁰ The purpose of this monitoring project is to investigate the effectiveness of one currently in-use BMP to determine how it might be improved. Permittees may choose the particular stormwater treatment or hydromodification control BMP to investigate. As with other monitoring requirements, Permittees may work collaboratively to conduct one investigation on a region-wide basis, or each stormwater countywide program may conduct an investigation.

Provision C.8.d.iii. Geomorphic Project

The physical integrity of a stream's bed, bank and riparian area is integral to the stream's capacity to withstand the impacts of discharged pollutants, including chemical pollutants, sediment, excess discharge volumes, increased discharge velocities, and increased temperatures. At present, various efforts are underway to improve geomorphic conditions in creeks, primarily through local watershed partnerships. In addition, local groups are undertaking *green stormwater projects* with the goal of minimizing the physical and chemical impacts of stormwater runoff on the receiving stream. Such efforts ultimately seek to improve the integrity of the waterbodies that receive urban stormwater runoff.

The purpose of the Geomorphic Project is to contribute to these ongoing efforts in each Stormwater Countywide Program area. Permittees may select the geomorphic project from three categories specified in the Permit.

C.8.e. Pollutants of Concern¹¹¹ Monitoring. Federal CWA section 303(d) TMDL requirements, as implemented under the CWC, require a monitoring plan designed to measure the effectiveness of the TMDL point and nonpoint source control measures and the progress the waterbody is making toward attaining water quality objectives. Such a plan necessarily includes collection of water quality data. Provision C.8.e. establishes a monitoring program to measure of the effectiveness of TMDL control measures in progressing toward WLAs. Locations, parameters, methods, protocols, and sampling frequencies for this monitoring are specified. A sediment delivery estimate/budget is also required to improve the Permittees' estimates of their loading estimates. In addition, a workplan is required for estimating loads and analyzing sources of emerging pollutants, which are likely to be present in urban runoff, in the next Permit term.

C.8.f. Citizen Monitoring and Participation. CWA section 101(e) and 40 CFR Part 25 broadly require public participation in all programs established pursuant to the CWA, to foster public awareness of environmental issues and decision-making processes. Provision C.8.f. is intended to do the following:

¹¹⁰ USEPA. 1996. *Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits*. Sept. 1, 1996. <http://www.epa.gov/npdes/pubs/swpol.pdf>

¹¹¹ See section C.9, C.11, C.12, and C.13 of this Fact Sheet for more information on Pollutants of Concern.

- Support current and future creek stewardship efforts by providing a framework for citizens and Permittees to share their collective knowledge of creek conditions; and
- Encourage Permittees to use and report data collected by creek groups and other third-parties when the data are of acceptable quality.

C.8.g. Reporting. CWC section 13267 provides authority for the Water Board to require technical water quality reports. Provision C.8.g. requires Permittees to submit electronic and comprehensive reports on their water quality monitoring activities to (1) determine compliance with monitoring requirements; (2) provide information useful in evaluating compliance with all Permit requirements; (3) enhance public awareness of the water quality in local streams and the Bay; and (4) standardize reporting to better facilitate analyses of the data, including for the CWA section 303(d) listing process.

C.9. – C.14. Pollutants of Concern including Total Maximum Daily Loads

Provisions C.9 through C.14 pertain to pollutants of concern, including those for which TMDLs are being developed or implemented.

Legal Authority

The following legal authority applies to provisions C.9 through C.14:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.44(d)(1) requires municipal stormwater permits to include any requirements necessary to, “[a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to, “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

Basin Plan Requirements: Section 4.8 of the Region’s Water Quality Control Plan (Basin Plan) requires that stormwater permits include requirements to prevent or reduce discharges of pollutants that cause or contribute to violations of water quality objectives. In the first phase, the Water Board requires implementation of technically and economically feasible control measures to reduce pollutants in stormwater to the MEP. If this first phase does not result in attainment of water quality objectives, the Water Board will consider permit conditions that might require implementation of additional control measures. For example, the control measures required as a result of TMDLs may go beyond the measures required in the first phase of the program.

General Strategy for Sediment-Bound Pollutants (Mercury, PCBs, legacy pesticides, PBDEs)

The control measures for mercury are intended to implement the urban runoff requirements stemming from TMDLs for this pollutant. The control measures required for PCBs are intended to implement those that are consistent with control measures in the PCBs TMDL implementation plan that has been approved by the Water Board and is pending approval by the State Board, the Office of Administrative Law, and U.S. EPA. The urban runoff management requirements in the PCBs TMDL implementation plan call for permit-term requirements based on an assessment of controls to reduce

PCBs to the MEP, and that is the intended approach of the required provisions for all pollutants of concern. Many of the control actions addressing PCBs and mercury will result in reductions of a host of sediment-bound pollutants, including legacy pesticides, mercury, PBDEs, and PCBs. The strategy for these pollutants is to use PCBs control guide decisions concerning where to focus effort, but implementation of the control efforts would taken into account the benefits for controlling other pollutants of concern. Further, because many of the control strategies addressing these pollutants of concern are relatively untested, the Water Board will implement control measures in the following modes:

1. Full-scale implementation throughout the region.
2. Focused implementation in areas where benefits are most likely to accrue.
3. Pilot-testing in a few specific locations.
4. Other: This may refer to experimental control measures, Research and Development, desktop analysis, laboratory studies, and/or literature review.

The logic of such categorization is that, as actions are tested and confidence is gained regarding level of experience and confidence in the control measure's effectiveness, the control measure may be implemented with a greater scope. For example, an untested control measure for which the effectiveness is uncertain may be implemented as a pilot project in a few locations during this permit term. If benefits result, and the action is deemed effective, it will be implemented in subsequent permit terms in a focused fashion in more locations or perhaps fully implemented throughout the Region, depending upon the nature of the measure. On the other hand there may be some control measures in which there is sufficient confidence, on the basis of prior experience, that the control action should be implemented in all applicable locations and/or situations. By conducting actions in this way and gathering information about effectiveness and cost, we will advance our understanding and be able to perform an updated assessment of the suite of actions that will constitute MEP for the following permit term. In fact, in addition to implementing control measures, gathering the necessary information about control measure effectiveness is a vital part of what needs to be accomplished by Permittees during this permit term. In the next permit term, control measures will be implemented on the basis of what we learn in this term, and we will, thus, achieve iterative refinement and improvement through time.

Background on Specific Provisions: Provisions C.9 through C.14 contain both technology-based requirements to control pollutants to the MEP and water quality based requirements to prevent or reduce discharges of pollutants that may cause or contribute to violations of water quality standards. Provisions C.9 and C.11 of the Permit incorporate requirements for the two TMDLs that have been fully approved and are effective for the Permittees. These TMDLs are for pesticide-related toxicity in urban creeks and mercury in San Francisco Bay. Additionally, Provision C.12 contains measures that address PCBs. The Regional Water Board has adopted a PCB TMDL, but it is still pending approval by State Board, the Office of Administrative Law, and U.S. EPA. This PCBs TMDL includes requirements that would be consistent with this

provision. Finally, Provision C.13 contains measures to implement the copper site-specific objective in San Francisco Bay.

Where a TMDL has been approved, NPDES permits must contain effluent limitations and conditions consistent with the requirements and assumptions in the TMDL.¹¹² Effluent limitations are generally expressed in numerical form. However, USEPA recommends that for NPDES-regulated municipal and small construction stormwater discharges, effluent limitations should be expressed as BMPs or other similar requirements rather than as numeric effluent limitations.¹¹³ Consistent with USEPA's recommendation, this section implements WQBELs expressed as an iterative BMP approach capable of meeting the WLAs in accordance with the associated compliance schedule. The Permit's WQBELs include the numeric WLA as a performance standard and not as an effluent limitation. The WLA can be used to assess if additional BMPs are needed to achieve the TMDL Numeric Target in the waterbody.

¹¹² 40 CFR 122.44(d)(1)(vii)(B)

¹¹³ USEPA, 2002. Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs. P. 4.

C.9. Pesticides Toxicity Control

Fact Sheet Findings in Support of Provision C.9.

- C.9-1** This Permit fulfills the Basin Plan amendments the Water Board adopted that establish a Water Quality Containment Strategy and TMDL for diazinon and pesticide-related toxicity for Bay Area urban creeks on November 16, 2005, and approved by the State Water Board on November 15, 2006. The Water Quality Containment Strategy requires urban runoff management agencies to minimize their own pesticide use, conduct outreach to others, and lead monitoring efforts. Control measures implemented by urban runoff management agencies and other entities (except construction and industrial sites) shall reduce pesticides in urban runoff to the MEP.
- C.9-2 (Allocations):** The TMDL is allocated to all urban runoff, including urban runoff associated with MS4s, Caltrans facilities, and industrial, construction, and institutional sites. The allocations are expressed in terms of toxic units and diazinon concentrations.

Specific Provision C.9 Requirements

C.9 provisions fully implement the TMDL for Urban Creeks Pesticide Toxicity. All C.9 provisions are stated explicitly in the implementation plan for this TMDL. Permittees are encouraged to coordinate activities with the Urban Pesticide Pollution Prevention Project, the Urban Pesticide Committee, and other agencies and organizations. The Urban Pesticide Pollution Prevention (UP3) Project has been funded by a grant from the State Water Board and its goal is to prevent water pollution from urban pesticide use. The Urban Pesticides Committee serves as an information clearinghouse and as a forum for coordinating pesticide TMDL implementation.

The UP3 Project provides resources and information on integrated pest management (IPM) and tools to municipalities to support their efforts to reduce municipal pesticide use and to conduct outreach to their communities on less-toxic methods of pest control. In addition, it provides technical assistance to municipalities to encourage the U.S. Environmental Protection Agency and the California Department of Pesticide Regulation to prevent water quality problems from pesticides. It also maintains and manages the Urban Pesticides Committee, a statewide network of agencies, nonprofits, industry, and other stakeholders that are working to solve water quality problems from pesticides.

Specific tools provided by the UP3 Project that relate to permit requirements include:

- Guidance and resources to help agencies create contracts and bid documents for structural pest management services that help them meet their integrated pest management goals
- IPM policies and ordinances
- IPM training workshops and materials

- Outreach program design resources
- Resources for evaluating effectiveness

Provisions C.9.a through C.9.d are designed to insure that integrated pest management (IPM) is adopted and implemented as policy by all municipalities. IPM is a pest control strategy that uses an array of complementary methods: natural predators and parasites, pest-resistant varieties, cultural practices, biological controls, various physical techniques, and pesticides as a last resort. If implemented properly, it is an approach that can significantly reduce or eliminate the use of pesticides. The implementation of IPM will be assured through training of municipal employees and the requirement that municipalities only hire IPM-certified contractors.

Provision C.9.e requires that municipalities (through cooperation or participation with BASMAA) track and participate in pesticide regulatory processes like the USEPA pesticide evaluation and registration activities related to surface water quality, and the California Department of Pesticide Regulation (DPR) pesticide evaluation activities. The goal of these efforts is to encourage both the state and federal pesticide regulatory agencies to accommodate water quality concerns within the pesticide regulation or registration process. Through these efforts, it could be possible to prevent pesticide-related water quality problems from happening by affecting which products are brought to market.

Provision C.9.g is critical to the success of municipal efforts to control pesticide-related toxicity. Future permits must be based on an updated assessment of what is working and what is not. With every provision comes the responsibility to assess its effectiveness and report on these findings through the permit. The particulars of assessment will depend on the nature of the control measure.

Provision C.9.h directs the municipalities to conduct outreach to consumers at point of purchase and provide targeted information on proper pesticide use and disposal, potential adverse impacts on water quality, and less toxic methods of pest prevention and control. One way in which this can be accomplished is for the Permittees to participate in and provide resources for the “Our Water, Our World” program (www.ourwaterourworld.org) or a functionally equivalent pesticide use reduction outreach program. The “Our Water, Our World” program has developed a Web site with many resources, “to assist consumers in managing home and garden pests in a way that helps protect” the environment.

C.10. Trash Load Reduction

Legal Authority

The following legal authority applies to section C.10:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, D, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B) requires, “shall be based on a description of a program, including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(2) requires, “a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3) requires, “a description of procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(4) requires, “a description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.”

San Francisco Bay Basin Plan, Chapter 4 – Implementation, Table 4-1 Prohibitions, Prohibition 7, which is consistent with the State Water Board’s Enclosed Bays and Estuaries Policy, Resolution 95-84, prohibits the discharge of rubbish, refuse, bark, sawdust, or other solid wastes into surface waters or at any place where they would contact or where they would be eventually transported to surface waters, including flood plain areas. This prohibition was adopted by the Water Board in the 1975 Basin Plan, primarily to protect recreational uses such as boating.

Fact Sheet Findings in Support of Provision C.10

- C.10-1** Trash and litter are a pervasive problem near and in creeks and in San Francisco Bay. Controlling trash is one of the priorities for this Permit reissuance not only because of the trash discharge prohibition, but also because trash and litter cause particularly major impacts on our enjoyment of creeks and the Bay. There are also significant impacts on aquatic life and habitat in those waters and eventually to the global ocean ecosystem, where plastic often floats, persists in the environment for hundreds of years, if not

forever, concentrates organic toxins, and is ingested by aquatic life. There are also physical impacts, as aquatic species can become entangled and ensnared and can ingest plastic that looks like prey, losing the ability to feed properly.

For the purposes of this provision, trash is defined to consist of litter and particles of litter. Man made litter is defined in California Government Code section 68055.1 (g): *Litter* means all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials, thrown or deposited on the lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing.

C.10-2 Data collected by Water Board staff using the SWAMP Rapid Trash Assessment (RTA) Protocol,¹¹⁴ over the 2003–2005 period,¹¹⁵ suggest that the current approach to managing trash in waterbodies is not reducing the adverse impact on beneficial uses. The levels of trash in the waters of the San Francisco Bay Region are alarmingly high, considering the Basin Plan prohibits discharge of trash and that littering is illegal with potentially large fines. Even during dry weather conditions, a significant quantity of trash, particularly plastic, is making its way into waters and being transported downstream to San Francisco Bay and the Pacific Ocean. On the basis of 85 surveys conducted at 26 sites throughout the Bay Area, staff have found an average of 2.93 pieces of trash for every foot of stream, and all the trash was removed when it was surveyed, indicating high return rates of trash over the 2003–2005 study period. There did not appear to be one county within the Region with higher trash in waters—the highest wet weather deposition rates were found in western Contra Costa County, and the highest dry weather deposition was found in Sonoma County. Results of the trash in waterbodies assessment work by staff show that rather than adjacent neighborhoods polluting the sites at the bottom of the watershed, these areas, which tend to have lower property values, are subject to trash washing off with urban stormwater runoff cumulatively from the entire watershed.

C.10-3 A number of key conclusions can be made on the basis of the trash measurement in streams:

- Lower watershed sites have higher densities of trash.
- All watersheds studied in the San Francisco Bay Region have high levels of trash.
- There are trash source hotspots, usually associated with parks, schools, or poorly kept commercial facilities, near creek channels, that appear to contribute a significant portion of the trash deposition at lower watershed sites.

¹¹⁴ SWAMP Rapid Trash Assessment Protocol, Version 8

¹¹⁵ SWAMP S.F. Bay Region Trash Report, January 23, 2007

- Dry season deposition of trash, associated with wind and dry season runoff, contributes measurable levels of trash to downstream locations.
 - The majority of trash is plastic at lower watershed sites where trash accumulates in the wet season. This suggests that urban runoff is a major source of floatable plastic found in the ocean and on beaches as marine debris.
 - Parks that have more evident management of trash by city staff and local volunteers, including cleanup within the creek channel, have measurably less trash pieces and higher RTA scores.
- C.10-4** The ubiquitous, unacceptable levels of trash in waters of the San Francisco Bay Region warrant a comprehensive and progressive program of education, warning, and enforcement, and certain areas warrant consideration of structural controls and treatment.
- C.10-5** Trash in urban waterways of coastal areas can become *marine debris*, known to harm fish and wildlife and cause adverse economic impacts.¹¹⁶ Trash is a regulated water pollutant that has many characteristics of concern to water quality. It accumulates in streams, rivers, bays, and ocean beaches throughout the San Francisco Bay Region, particularly in urban areas.
- C.10-6** Trash adversely affects numerous beneficial uses of waters, particularly recreation and aquatic habitat. Not all litter and debris delivered to streams are of equal concern with regards to water quality. Besides the obvious negative aesthetic effects, most of the harm of trash in surface waters is imparted to wildlife in the form of entanglement or ingestion.^{117,118} Some elements of trash exhibit significant threats to human health, such as discarded medical waste, human or pet waste, and broken glass.¹¹⁹ Also, some household and industrial wastes can contain toxic batteries, pesticide containers, and fluorescent light bulbs that contain mercury. Large trash items such as discarded appliances can present physical barriers to natural stream flow, causing physical impacts such as bank erosion. From a management perspective, the persistent accumulation of trash in a waterbody is of particular concern, and signifies a priority for prevention of trash discharges. Also of concern are trash *hotspots* where illegal dumping, littering, and/or accumulation of trash occur.
- C.10-7** The narrative water quality objectives applicable to trash are Floating Material (Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely

¹¹⁶ Moore, S.L., and M.J. Allen. 2000. Distribution of anthropogenic and natural debris on the mainland shelf of the Southern California Bight. *Mar. Poll. Bull.* 40:83-88.

¹¹⁷ Laist, D. W. and M. Liffmann. 2000. *Impacts of marine debris: research and management needs*. Issue papers of the International Marine Debris Conference, Aug. 6-11, 2000. Honolulu, HI, pp. 16-29.

¹¹⁸ McCauley, S.J. and K.A. Bjorndahl. 1998. Conservation implications of dietary dilution from debris ingestion: sublethal effects in post-hatchling loggerhead sea turtles. *Conserv. Biol.* 13(4):925-929.

¹¹⁹ Sheavly, S.B. 2004. *Marine Debris: an Overview of a Critical Issue for our Oceans*. 2004 International Coastal Cleanup Conference, San Juan, Puerto Rico. The Ocean Conservancy.

affect beneficial uses), Settleable Material (Waters shall not contain substances in concentrations that result in the deposition of material that cause nuisance or adversely affect beneficial uses), and Suspended Material (Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses).

- C.10-8** The Water Board, at its February 11, 2009 hearing, adopted a resolution proposing that 26 waterbodies in the region be added to the 303(d) list for the pollutant trash. The adopted Resolution and supporting documents are contained in Attachment 10.1 – 303(d) Trash Resolution and Staff Report Feb 2009.

Specific Provision C.10 Requirements

Provision C.10. Permittees shall demonstrate compliance with Discharge Prohibition A.2 and trash-related Receiving Water Limitations through the timely implementation of control measures and other actions to reduce trash loads from municipal separate storm sewer systems (MS4s) by 40% by 2014, 70% by 2017, and 100% by 2022 as further specified below.

C.10.a.i. Short-Term Trash Load Reduction Plan

The Short-Term Trash Load Reduction Plan is intended to describe actions to incrementally reduce trash loads toward the 2014 requirement of a 40% reduction and eventual abatement of trash loads to receiving waters.

C.10.a.ii. Baseline Trash Load and Trash Load Reduction Tracking Method

In order to achieve the incremental trash load reductions in an accountable manner, the Permittees will propose Baseline Trash Loads and a Trash Load Reduction Tracking Method. The Tracking will account for additional trash load reducing actions and BMPs the Permittees implement. Permittees are also able to propose, with documentation, areas for exclusion from the Tracking Method accounting, by demonstrating that these areas already meet the Discharge Prohibition A.2 and have no trash loads.

C.10.a.iii. Minimum Full Trash Capture

Installation of full trash capture systems to prevent trash loads through the MS4 is MEP as demonstrated by the significant implementation of these systems occurring in the Los Angeles region. The minimum full trash capture installation requirements in this permit represent a moderate initial step toward employing this tool for trash load reduction.

C.10.b.i, ii. Trash Hot Spot Selection and Clean Up

Trash Hot Spots must be cleaned up as an interim measure until complete abatement of trash loads occurs. Eventually, with adequate source controls and trash loading abatement, trash hot spots will not occur in the receiving waters. In addition, Permittees will be credited for trash volume removed from hot spots in the trash load reduction tracking.

C.10.b.iii. Hot Spot Assessments

Trash Hot Spot assessments have been simplified and streamlined. Rather than counting individual trash items, which can vary in size from small plastic of glass particles to shopping carts, volume of material removed is measured, along with dominant types of trash removed. Photographs are recorded both before and after cleanup, to add to the record and verify cleanup.

C.10.c. Long Term Trash Load Reduction

Each Permittee will submit a Plan to achieve the incremental progress of 70% trash load reduction by 2017 during the following permit term, and the 100% reduction of trash loading by 2022.

C.10.d. Reporting

This sub-provision sets forth the reporting required in this provision, including the specific submittals and reports, and the annual reporting requirements.

Costs of Trash Control

Costs for either enhanced trash management measure implementation or installation and maintenance of trash capture devices are significant, but when spread over several years, and when viewed on a per-capita basis, are reasonable. Also, Trash capture devices have been installed by cities in California and in the Bay Region.

Trash and litter are costly to remove from our aquatic resource environments. Staff from the California Coastal Commission report that the Coastal Cleanup Day budget statewide: \$200,000-250,000 for staff Coastal Commission staff, and much more from participating local agencies. The main component of this event is the 18,000 volunteer-hours which translates to \$3,247,200 in labor, and so is equivalent to \$3,250,000-3,500,000 per year to clean up 903,566 pounds of trash and recyclables at \$3.60 to \$3.90 per pound. This is one of the most cost-effective events because of volunteer labor and donations. The County of Los Angeles spends \$20 million per year to sweep beaches for trash, according to Coastal Commission staff.

In Oakland, the Lake Merritt Institute is currently budgeted at \$160,000 per year, with trash and litter removal from the Lake as a major task. The budget has increased from about \$45,000 in 1996 to current levels. In the period of 1996-2005 the Lake Merritt Institute staff, utilizing significant volunteer resources, and accomplishing other education tasks, removed 410,859 pounds of trash from the Lake at cost of \$951,725 at \$2.3 per pound.

The City of Oakland reports that installation of two vortex and screen separators, titled by their brand name of CDS units, which cost, according to the table below, \$821,000 for installations that treat tributary catchments of 192 acres before discharge to Lake Merritt at \$4,276 per acre.

City of Oakland—CDS Unit Overview 9-07

Existing CDS unit location	Outfall number	Treatment area (acres)	Cost of implementation	Sizing	Maintenance requirements	Comments
Intersection of 27 th and Valdez Streets	56*	71	\$203,000 to contractor; plus ~\$100,000 City costs	73 cfs peak flow; 36" stormdrain; Unit sizing: 18'6'6" box with 10'11"diam x 9'6" long cylinder	Visually inspect CDS Unit; remove trash and debris with Hydro Flusher bi-monthly	Installed in 2006. Required relocation of electrical conduit. Water main and gas line were also in the way; the box was adjusted to accommodate these conflicts.
Intersection of 22 nd and Valley Streets	56*	121	\$368,000 to contractor; plus ~\$150,000 City costs	115 cfs peak flow; 54" stormdrain; Unit sizing: 18'8.5'6" box with 12'diam x 9'6" long cylinder	Visually inspect CDS Unit; remove trash and debris with Hydro Flusher bi-monthly	Installed in 2006. Installation costs were higher than anticipated. Sewer lines and PGE facilities were exposed that were not known before. Unit had to be modified and poured-in-place.

* The city is treating 192 acres or 72 percent of the 252 acres draining to outfall 56.

Mr. Morad Sedrak, the TMDL Implementation Program Manager, Bureau of Sanitation, Department of Public Works, City of Los Angeles, reports that the City plans to invest \$72 million dollars for storm drain catch basin based capture device installation primarily, for a City of 4 million population, for a per-capita cost of \$18 dollars. This effort is occurring over a span of over five years, for an annual per-capita cost of under \$4.

Mr. Sedrak reports that O&M costs are not anticipated to increase, as the City of L.A. is already budgeted for 3 catch basin cleanings per year. He also states that catch basin inserts installed inside the catch basin in front of the lateral pipe, which have been certified by the Los Angeles Regional Water Board as total capture trash control devices, cost approximately \$800 to \$3,000 depending on the depth of the catch basin. The price quoted includes installation and the insert is made of Stainless Steel 316.

Furthermore, the price for catch basin opening screen covers, which are designed to retain trash at the street level for removal by sweepers, and also to open if there is a potential flooding blockage, ranges roughly from \$800 to \$4,500, depending on the opening size of the catch basin.

The City of Los Angeles has currently spent 27 million dollars on a retrofit program to install catch basin devices in approximately 30% of its area, with either inserts or screens

or both. Mr. Sedrak states that Los Angeles plans to spend \$45 million over the next 3 years to retrofit the remaining catch basins within the City. The total number of catch basins within the City is approximately 52,000.

Here are some links to information about the Los Angeles trash control approach:

<http://www.lastormwater.org/Siteorg/program/TMDLs/trashtmdl.htm>

http://www.lastormwater.org/Siteorg/download/pdfs/general_info/Request-Certification-10-06.pdf

http://www.lastormwater.org/Siteorg/download/pdfs/general_info/Request-Certification-10-06.pdf
http://www.lastormwater.org/Siteorg/program/poll_abate/cbscreens.htm

http://www.lastormwater.org/Siteorg/program/poll_abate/cbinserts.htm

http://www.lastormwater.org/Siteorg/program/poll_abate/cbscreens.htm

Additional cost information on various trash capture devices are included in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) BMP Trash Toolbox (July 2007). The Toolbox contains cost information for both trash capture devices and enhanced trash management measure implementation, covers a broad range of options and also discusses operation and maintenance costs. Catch basin screens are included with an earlier estimate by the City of Los Angeles of \$44 million over 10 years to install devices in 34,000 inlets.

Litter booms are also discussed with an example from the City of Oakland. The Damon Slough litter boom or sea curtain cost \$36,000 for purchase and installation, including slough side access improvements for maintenance and trash removal. Annual maintenance costs have been \$77,000 for weekly maintenance, which includes use of a crane for floating trash removal.

The costs of the full trash capture device installation required in the Order is significantly less than the previous tentative orders requirements for trash capture, as set forth in the table below.

Trash Capture Cost Estimates – Final TO versus previous TOs

Trash Capture Device Requirement	Acres of Capture	Cost for Trash Capture Installation	Percent of Retail/Wholesale Commercial (ABAG 2005)	Per capita \$, Population = 4,533,634
Final TO: Implemented in Year 4 – 30% of Retail/Wholesale Commercial	5527	\$ 27,635,000	30%	\$6.06
Previous TOs: Implement in Year 4, 5% of Urban/suburban land	0.05 X 529,712 = 26,485 (BASMAA) or ABAG 0.05 X 655,015 = 32,750	\$132,425,000 or \$163,750,000	5% of Urban/suburban land	\$29 or \$36

30% X 18,426 acres = 5527 acres X \$5000/acre = **\$27,635,000** for four counties for installation; maintenance will add an additional cost. The Permittees may work cooperatively to achieve this capture installation requirement, and there is the potential for Regional revenue development. The previous requirement was 5% of (.05 X 655,015) (529,712 by BASMAA’s count) acres of urban land (from ABAG 2005 table) = 32,750 acres, ((26,486 according to BASMAA) X \$5000 = \$132,000,000).

C.11. Mercury Controls

Fact Sheet Findings in Support of Provision C.11

- C.11-1** On August 9, 2006, the Water Board adopted a Basin Plan amendment including a revised TMDL for mercury in San Francisco Bay, two new water quality objectives, and an implementation plan to achieve the TMDL. The State Water Board has approved this Basin Plan amendment, and USEPA approval is pending. C.11-2 through C.11-6 are components of the Mercury TMDL implementation plan relevant to implementation through the municipal stormwater permit.
- C.11-2** The 2003 load of mercury from urban runoff is 160 kg/yr, and the aggregate WLAs for urban runoff is 80 kg/yr and shall be implemented through the NPDES stormwater permits issued to urban runoff management agencies and Caltrans. The urban stormwater runoff allocations implicitly include all current and future permitted discharges, not otherwise addressed by another allocation, and unpermitted discharges within the geographic boundaries of urban runoff management agencies (collectively, *source category*) including, but not limited to, Caltrans roadway and non-roadway facilities and rights-of-way, atmospheric deposition, public facilities, properties proximate to stream banks, industrial facilities, and construction sites.
- C.11-3** The allocations for this source category shall be achieved within 20 years, and, as a way to measure progress, an interim loading milestone of 120 kg/yr, halfway between the current load and the allocation, should be achieved within 10 years. If the interim loading milestone is not achieved, NPDES-permitted entities shall demonstrate reasonable and measurable progress toward achieving the 10-year loading milestone.
- C.11-4** The NPDES permits for urban runoff management agencies shall require the implementation of BMPs and control measures designed to achieve the allocations or accomplish the load reductions derived from the allocations. In addition to controlling mercury loads, BMPs or control measures shall include actions to reduce mercury-related risks to humans and wildlife. Requirements in the permit issued or reissued and applicable for the term of the permit shall be based on an updated assessment of control measures intended to reduce pollutants in stormwater runoff to the MEP and remain consistent with the section of this chapter titled, *Surface Water Protection and Management—Point Source Control—Stormwater Discharges*.
- C.11-5** The following additional requirements are or shall be incorporated into NPDES permits issued or reissued by the Water Board for urban runoff management agencies.
- a. Evaluate and report on the spatial extent, magnitude, and cause of contamination for locations where elevated mercury concentrations exist;
 - b. Develop and implement a mercury source control program;

- c. Develop and implement a monitoring system to quantify either mercury loads or loads reduced through treatment, source control, and other management efforts;
- d. Monitor levels of methylmercury in discharges;
- e. Conduct or cause to be conducted studies aimed at better understanding mercury fate, transport, and biological uptake in San Francisco Bay and tidal areas;
- f. Develop an equitable allocation-sharing scheme in consultation with Caltrans (see below) to address Caltrans roadway and non-roadway facilities in the program area, and report the details to the Water Board;
- g. Prepare an Annual Report that documents compliance with the above requirements and documents either mercury loads discharged, or loads reduced through ongoing pollution prevention and control activities; and
- h. Demonstrate progress toward (a) the interim loading milestone, or (b) attainment of the allocations shown in Individual WLAs (see Table 4-w of the Basin Plan amendment), by using one of the following methods:
 - (1) Quantify the annual average mercury load reduced by implementing
 - i. Pollution prevention activities, and
 - ii. Source and treatment controls. The benefit of efforts to reduce mercury-related risk to wildlife and humans should also be quantified. The Water Board will recognize such efforts as progress toward achieving the interim milestone and the mercury-related water quality standards upon which the allocations and corresponding load reductions are based. Loads reduced as a result of actions implemented after 2001 (or earlier if actions taken are not reflected in the 2001 load estimate) may be used to estimate load reductions.
 - (2) Quantify the mercury load as a rolling 5-year annual average using data on flow and water column mercury concentrations.
 - (3) Quantitatively demonstrate that the mercury concentration of suspended sediment that best represents sediment discharged with urban runoff is below the suspended sediment target.

C.11-6 Urban runoff management agencies have a responsibility to oversee various discharges within the agencies' geographic boundaries. However, if it is determined that a source is substantially contributing to mercury loads to the Bay or is outside the jurisdiction or authority of an agency, the Water Board will consider a request from an urban runoff management agency that may include an allocation, load reduction, and/or other regulatory requirements for the source in question.

Specific Provision C.11 Requirements

The C.11 provisions implement the mercury TMDL and follow the general approach for sediment-bound pollutants discussed above where we seek to build our understanding and level of certainty concerning control actions by implementing actions in a phased approach. We then expand implementation of those actions that prove effective, and perhaps scale back or discontinue those that are not effective. Accordingly, there are some provisions that will be implemented throughout the Region, some that will be tested on a limited basis first before making the decision to expand region-wide in the next permit term. Some of the measures are companion measures for efforts targeting PCBs.

Provision C.11.a. Mercury is found in a wide variety of consumer products (e.g., fluorescent bulbs) that are subject to recycling requirements. These recycling efforts are already happening throughout the Region, and Provision C.11.a requires promotion, facilitation and/or participation in these region-wide recycling efforts to increase effectiveness and public participation.

Provision C.11.b. The remand resolution of the SF Bay Mercury TMDL made it clear that methyl mercury monitoring must be required of all NPDES Permittees. Methyl mercury is the most toxic form of mercury, and there is very little information, if any, regarding the concentrations of methyl mercury found in urban runoff. The purpose of the monitoring required through this provision is to obtain seasonal information and to assess the magnitude and spatial/temporal patterns of methylmercury concentrations in urban runoff.

Provisions C.11.c through Provision C.11.f relate to identical C.12 Provisions for PCBs. For each of these, sites for pilot studies will primarily be chosen on the basis of the potential for reducing PCB loads, but consideration will be given to mercury removal in the final design and implementation of the studies. For more information, see the fact sheet discussions for Provisions C.12.c, d, e, and f and Provision C.2.g.

Provision C.11.g implements the TMDL requirement that Permittees measure mercury loads and loads reduced from program activities. There are three options for accomplishing this requirement: quantifying mercury loads reduced through implemented control measures, quantify mercury loading into the Bay from urban runoff, or demonstrating that the concentration of mercury on suspended sediment particles is below the sediment target of 0.2 ppm. It is likely that the first option will be chosen, and this will require development of an accounting system to establish what load reductions result from program activities. This will not be difficult for those measures that involve capture and measurement of mercury-containing sediment, but it will be more challenging for efforts that do not involve direct measurement.

Provision C.11.h is equivalent to Provision C.12.h for PCBs and is motivated by the same remaining technical uncertainties.

Provision C.11.i requires actions that manage human health risk due to mercury and PCBs. These may include efforts to communicate the health risks of eating Bay fish and other efforts aimed at high risk-communities.

Provision C.11.j requires an allocation sharing scheme to be developed in cooperation with Caltrans. The urban runoff TMDL allocation implicitly includes loads from Caltrans facilities.

C.12. PCBs Controls

The C.12 provisions are consistent with the regulatory approach and implementation plan of the San Francisco Bay PCBs TMDL adopted by the Water Board. They follow the general approach for sediment-bound pollutants discussed above where we seek to build our understanding and level of certainty concerning control actions by implementing actions in a phased approach. We then expand implementation of those actions that prove effective, and perhaps scale back or discontinue those that are not effective. Accordingly, there are some provisions that will be implemented throughout the region, some that will be tested on a limited basis first before making the decision to expand region-wide in the next permit term.

Fact Sheet Findings in Support of Provision C.12

C.12-2 On February 13, 2008, the Water Board adopted a Basin Plan amendment establishing a TMDL for PCBs in San Francisco Bay and an implementation plan to achieve the TMDL. Approval by the State Water Board and USEPA is pending. The following excerpts from the TMDL implementation plan are relevant to implementation of the municipal stormwater permit.

“Stormwater runoff wasteload allocations shall be achieved within 20 years and shall be implemented through the NPDES stormwater permits issued to stormwater runoff management agencies and the California Department of Transportation (Caltrans). The urban stormwater runoff wasteload allocations implicitly include all current and future permitted discharges, not otherwise addressed by another allocation, and unpermitted discharges within the geographic boundaries of stormwater runoff management agencies including, but not limited to, Caltrans roadway and non-roadway facilities and rights-of-way, atmospheric deposition, public facilities, properties proximate to stream banks, industrial facilities, and construction sites.

Requirements in each NPDES permit issued or reissued shall be based on an updated assessment of best management practices and control measures intended to reduce PCBs in urban stormwater runoff. Control measures implemented by stormwater runoff management agencies and other entities (except construction and industrial sites) shall reduce PCBs in stormwater runoff to the maximum extent practicable. Control measures for construction and industrial sites shall reduce discharges based on best available technology economically achievable. All permits shall remain consistent with Section 4.8 - Stormwater Discharges.

In the first five-year permit term, stormwater Permittees will be required to implement control measures on a pilot scale to determine their effectiveness and technical feasibility. In the second permit term, stormwater Permittees will be required to implement effective control measures, that will not cause significant adverse environmental impacts, in strategic locations, and to develop a plan to fully implement control measures that will result in

attainment of allocations, including an analysis of costs, efficiency of control measures and an identification of any significant environmental impacts. Subsequent permits will include requirements and a schedule to implement technically feasible, effective and cost efficient control measures to attain allocations. If, as a consequence, allocations cannot be attained, the Water Board will take action to review and revise the allocations and these implementation requirements as part of adaptive implementation-

In addition, stormwater Permittees will be required to develop and implement a monitoring system to quantify PCBs urban stormwater runoff loads and the load reductions achieved through treatment, source control and other actions; support actions to reduce the health risks of people who consume PCBs-contaminated San Francisco Bay fish; and conduct or cause to be conducted monitoring, and studies to fill critical data needs identified in the adaptive implementation section.

Stormwater runoff management agencies have a responsibility to oversee various discharges within the agencies' geographic boundaries. However, if it is determined that a source is substantially contributing to PCBs loads to the Bay or is outside the jurisdiction or authority of an agency the Water Board will consider a request from an stormwater runoff management agency which may include an allocation, load reduction, and/or other regulatory requirements for the source in question."

- C.12-3 Some PCB congeners have dioxin-like properties.** Dioxins are persistent, bioaccumulative, toxic compounds that are produced from the combustion of organic materials in the presence of chlorine. Dioxins enter the air through fuel and waste emissions, including diesel and other motor vehicle exhaust fumes and trash incineration, and are carried in rain and contaminate soil. Dioxins bioaccumulate in fat, and most human exposure occurs through the consumption of animal fats, including those from fish. Therefore, the actions targeting PCBs will likely have the simultaneous benefit of addressing a portion of the dioxin impairment resulting from dioxin-like PCBs.

Specific Provision C.12 Requirements

Provision C.12.a. PCBs were used in a variety of electrical devices and equipment, some of which still can be found during industrial inspections. Provision C.12.a requires the stormwater management agencies to ensure that industrial inspectors can identify PCBs or PCB-containing equipment during their inspections and make sure appropriate agencies are notified if they are found. There is enough experience and/or background knowledge about the presence of such PCB-containing equipment that this measure should be implemented region-wide during this permit term.

Provision C.12.b. PCBs are used in a variety of building materials like caulks and adhesives. PCBs contained in such materials can be liberated and transported in runoff during and after demolition and renovation activities. At this point, it is not known how extensive this type of PCB contamination is in the region. Therefore, the expectation for

this permit term is that Permittees conduct pilot studies (Provision C.12.b) that includes evaluation of the presence of PCBs in such materials, sampling and analysis, and BMP development to prevent PCBs in these materials from being released into the environment during demolition and renovation. Conducting these pilot tests and reporting results will help determine if control measures for PCBs from these sources should be implemented in a more widespread fashion in the next permit term.

Provisions C.12.c and C.12.d form the core of PCB-related efforts for this permit term, and these efforts are crucial for the iterative development of effective control measures for PCBs and other sediment-bound pollutants in future permit terms. The overarching purpose of these two provisions is to conduct five comprehensive pilot studies in locations known to contain high levels of PCBs. The pilot studies will involve a combination of efforts including abatement of the on-land PCB contamination (Provision C.12.c) as well as exploration of sediment management practices (C.12.d) that can be implemented by municipalities to control migration of the PCBs away from the source of contamination. We expect that a suite of control measures will be applied in these five pilot regions to determine the optimum suite of measures for controlling PCB contamination and preventing its transport through the storm drain system. The lessons learned through these pilot efforts will inform the direction of future efforts targeting contaminated zones throughout the Region in subsequent permit terms.

Provision C.12.e. One promising management practice for addressing a wide range of sediment-bound contaminants, including PCBs is on-site treatment. Provision C.12.e requires selection of 10 locations for pilot studies spanning treatment types as described in the Provision. This effort can be conducted in conjunction with Provision C.12.d such that on-site treatment efforts conducted as part of C.12.d can be counted toward accomplishing C.12.e requirements.

Provision C.12.f. Another promising management practice is the diversion of certain flows to the sanitary sewers to be treated by the local POTWs. Provision C.12.f requires an evaluation of locations for diversion pilot studies and implementation of pilot studies at five pump stations. This effort can be conducted in conjunction with Provision C.12.d such that POTW diversion efforts conducted as part of C.12.d can be counted toward accomplishing C.12.f requirements. Also see discussion under Provision C.2.g.

Provision C.12.g requires, consistent with the approach taken in the PCBs TMDL, development of a monitoring system to quantify PCBs loads and loads reduced through source control, treatment and other management measures. This monitoring system will be used to determine progress toward meeting TMDL load allocations. This system should establish the baseline loading or loads reduced against which to compare future loading and load reductions.

Provision C.12.h. There are still uncertainties surrounding the magnitude and nature of PCBs reaching the Bay in urban runoff and the ultimate fate of such PCBs, including biological uptake. Provision C.12.h requires that Permittees ensure that fate and transport studies of PCBs in urban runoff are completed.

Provision C.12.i. requires actions that manage human health risk due to mercury and PCBs. These may include efforts to communicate the health risks of eating Bay fish and other efforts aimed at high risk-communities.

C.13. Copper Controls

Chronic and acute site-specific objectives (SSOs) for dissolved copper have been established in all segments of San Francisco Bay. The plan to implement the SSOs and ensure the achievement and ongoing maintenance of the SSOs in the entire Bay includes two types of actions for urban runoff management agencies. These actions from the SSO implementation are implemented through this permit as provisions to control urban runoff sources of copper as well as measures to resolve remaining technical uncertainties for copper fate and effects in the Bay.

The control measures for urban runoff target significant sources of copper identified in a report produced in 2004 for the Clean Estuary Partnership.¹²⁰ This report updated information on sources of copper in urban runoff, loading estimates and associated level of uncertainty, and summarized feasible control measures and priorities for further investigation. Accordingly, the permit provisions target major sources of copper including vehicle brake pads, architectural copper, copper pesticides, and industrial copper use.

Fact Sheet Findings in Support of Provision C.13.

- C.13-1** Urban runoff is a conveyance mechanism by which copper reaches San Francisco Bay.
- C.13-2** Copper has the reasonable potential to cause or contribute to exceedances of copper water quality standards in San Francisco Bay.
- C.13-3** Site specific water quality objectives for dissolved copper have already been adopted for South San Francisco Bay will soon be adopted for the rest of the Bay.
- C.13-4** The Permit requirements to control copper to the MEP are necessary to implement and support ongoing achievement of the site-specific water quality objectives.

Specific Provision C.13. Requirements

Provision C.13.a. Copper is used as an architectural feature in roofs, gutters and downspouts. When these roofs are cleaned with aggressive cleaning solutions, substantial amounts of copper can be liberated. The provision C.13.a for architectural copper involves a variety of strategies ranging from BMPs to prohibition against discharge of these cleaning wastes to the storm drain.

¹²⁰ TDC (TDC Environmental). 2004. *Copper Sources in Urban Runoff and Shoreline Activities*. Prepared for the Clean Estuary Partnership.

Provision C.13.b. Copper is commonly used as an algacide in pools, spas, and fountains. The provision C.13.b prohibits discharge to the storm drain of copper-containing wastewater from such amenities.

Provision C.13.c. Vehicle brake pads are a large source of copper to the urban environment. There are cooperative efforts (e.g., the Brake Pad Partnership) evaluating the potential effects of brake wear debris on water quality. This cooperative effort could result in voluntary actions to reduce the amount of copper in automobile brake pads. However, this voluntary reduction is uncertain, and some aftermarket brake pads are possibly unaffected by the voluntary action. Moreover, the benefits of copper content reduction might be slowly realized because there is a great deal of wear debris already deposited on watersheds, and this wear debris will continue to be deposited as long as copper-containing brake pads are in use. Therefore, there might need to be additional measures addressing copper-containing wear debris on the part of urban stormwater management agencies. Provision C.13.c requires ongoing participation in the cooperative efforts of the Partnership.

Provision C.13.d Some industrial facilities likely use copper or have sources of copper (e.g., plating facilities, metal finishers, auto dismantlers). This control measure requires municipalities to include these facilities in their inspection program plans.

The most recent Staff Report¹²¹ for the SSOs north of the Dumbarton Bridge also describes several areas of remaining technical uncertainty, and **Provision C.13.e** requires studies to address these uncertainties. Two of these areas are of particular concern, and urban runoff management agencies are required to conduct or cause to be conducted studies to help resolve these two uncertainties.

The first uncertainty concerns copper's tendency, even at low concentrations, to cause a variety of sublethal (not resulting in death, but in impaired function) effects. The studies documenting such effects have, so far, been conducted in the laboratory in experiments modeling freshwater systems, and many of them have not yet been published. A number of uncertainties need to be resolved before interpretation and extension to marine or estuarine systems can be attempted.¹²²

The second uncertainty is that surface sediment samples have exhibited toxicity to test organisms at a number of sites throughout the Bay. Research has shown that sediment toxicity to bivalve embryos is caused by "elevated concentrations of divalent cations....with copper as the most probable cause of toxicity." Additional studies are needed to further examine whether water and sediment toxicity tests used in the RMP are accurate predictors of impacts on the Bay's aquatic and benthic communities.

¹²¹ SFBRWQCB (San Francisco Bay Regional Water Quality Control Board). 2007. *Copper Site-Specific Objectives in San Francisco Bay: Proposed Basin Plan Amendment and Draft Staff Report*. June.

¹²² Ibid.

C.14. Polybrominated Diphenyl Ethers (PBDE), Legacy Pesticides and Selenium

This section is predicated on the fact that legacy pesticides, PBDEs, and selenium are either known to impair or potentially impair Bay and tributary beneficial uses. Further, urban stormwater is a likely or potential cause or contributor to such impairment. The requirements for this permit term are primarily information gathering consistent with Provision C.1. Namely, this provision requires that Permittees gather information on a number of pollutants of concern (e.g., PBDEs, DDT, dieldrin, chlordane, selenium) for which TMDLs are planned or are in the early stages of development.

The goals of the provisions in this section are the following: One goal is to determine the concentrations and distribution of these pollutants and if urban runoff is a conveyance mechanism associated with their possible impairment of San Francisco Bay.

A second goal is to gather and provide information to allow calculation of PBDEs, legacy pesticides, and selenium loads to San Francisco Bay from urban runoff conveyance systems. A third goal is to identify control measures and/or management practices to eliminate or reduce discharges of PBDEs, legacy pesticides, or selenium conveyed by urban runoff conveyance systems. The Permittees are encouraged to work with the other municipal stormwater management agencies in the Bay Region to implement a plan to identify, assess, and manage controllable sources of these pollutants in urban runoff. The control actions initiated for PCBs will form the core of initial actions targeting sediment bound pollutants like these. It is very likely that some of these PCB control measures (see Provision C.12) warrant consideration for the control of sediment bound pollutants like PBDEs, legacy pesticides, and possibly others as well.

C.15. Exempted and Conditionally Exempted Discharges

Legal Authority

Broad Legal Authority: CWA section 402(p)(3)(B)(ii-iii), CWC section 1337, and Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(B, C, D, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B) requires MS4 operators, “to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) provides that the Permittees shall prevent all types of illicit discharges into the MS4 except for certain non-stormwater discharges.

Fact Sheet Findings in Support of Provision C.15.

Prohibition A.1. effectively prohibits the discharge of non-stormwater discharges into the storm sewer system. However, we recognize that certain types of non-stormwater discharges may be exempted from this prohibition if they are unpolluted and do not violate water quality standards. Other types of non-stormwater discharges may be conditionally exempted from Prohibition A.1. if the discharger employs appropriate control measures and BMPs prior to discharge, and monitors and reports on the discharge.

Specific Provision C.15. Requirements

Provision C.15.a. Exempted Non-Stormwater Discharges. This section of the Permit identifies the types of non-stormwater discharges that are exempted from Discharge Prohibition A.1. if such discharges are unpolluted and do not violate water quality standards. If any exempted non-stormwater discharge is identified as a source of pollutants to receiving waters, the discharge shall be addressed as a conditionally exempted discharge and must meet the requirements of Provision C.15.b.

Provision C.15.b. Conditionally Exempted Non-Stormwater Discharges. This section of the Permit identifies the types of non-stormwater discharges that are conditionally exempted from Discharge Prohibition A.1. if they are identified by Permittees or the Executive Officer as not being sources of pollutants to receiving waters. To eliminate adverse impacts from such discharges, project proponents shall develop and implement appropriate pollutant control measures and BMPs, and where applicable, shall monitor and report on the discharges in accordance with the requirements specified in Provision C.15.b. The intent of Provision C.15.b.’s requirements is to facilitate Permittees in regulating these non-stormwater discharges to the storm drains since the Permittees have ultimate responsibility for what flows in those storm drains to receiving waters. For all planned discharges, the nature and characteristic of the discharge must be verified prior to the discharge so that effective

pollution control measures are implemented, if deemed necessary. Such preventative measures are cheaper by far than post-discharge cleanup efforts.

Provision C.15.b.i.(1). Pumped Groundwater from Non Drinking Water Aquifers. These aquifers tend to be shallower than drinking water aquifers and more subject to contamination. The wells must be purged prior to sample collection. Since wells are purged regularly, this section of the Permit requires twice a year monitoring of these aquifers. Pumped groundwater from non drinking water aquifers, which are owned and/or operated by Permittees who pump groundwater as drinking water, are conditionally exempted as long as the discharges meet the requirements in this section of the Permit.

Provision C.15.b.i.(2). Pumped Groundwater, Foundation Drains, and Water from Crawl Space Pumps and Footing Drains. This section of the Permit encourages these types of discharges to be directed to landscaped areas or bioretention units, when feasible. If the discharges cannot be directed to vegetated areas, it requires testing to determine if the discharge is uncontaminated. Uncontaminated discharges shall be treated, if necessary, to meet specified discharge limits for turbidity and pH.

Provision C.15.b.ii. Air Conditioning Condensate. Small air conditioning units are usually operated during the warm weather months. The condensate from these units are uncontaminated and unlikely to reach a storm drain or waters of the State because they tend to be low in volume and tend to evaporate or percolate readily. Therefore, condensate from small air conditioning units should be discharged to landscaped areas or the ground. Commercial and industrial air conditioning units tend to produce year-round continuous flows of condensate. It may be difficult to direct a continuous flow to a landscaped area large enough to accommodate the volume. While the condensate tends to be uncontaminated, it picks up contaminants on its way to the storm drain and/or waters of the State and can contribute to unnecessary dry weather flows. Therefore, discharges from new commercial and industrial air conditioning units should be discharged to landscaped areas, if they can accommodate the continuous volume, or to the sanitary sewer, with the local sanitary sewer agency's approval. If none of these options are feasible, air conditioning condensate can be directly discharged into the storm drain. If descaling or anti-algal agents are used to treat the air conditioning units, residues from these agents must be properly disposed of.

Provision C.15.b.iii. Planned, Unplanned, and Emergency Discharges of the Potable Water System. Potable water discharges contribute pollution to water quality in receiving waters because they contain chlorine or chloramines, two very toxic chemicals to aquatic life. Potable water discharges can cause erosion and scouring of stream and creek banks, and sedimentation can result if effective BMPs are not implemented. Therefore, appropriate dechlorination and monitoring of chlorine residual, pH and turbidity, particularly for planned discharges of potable water, are crucial to prevent adverse impacts in the receiving waters.

This section of the Permit requires Permittees to notify Water Board staff at least one week in advance for planned discharges of potable water with a flowrate of 250,000 gpd or more or a total 500,000 gallons or more. These planned discharges must meet specified discharge benchmarks for chlorine residual, pH, and turbidity.

To address unplanned discharges of potable water such as non-routine water line breaks, leaks, overflows, fire hydrant shearing, and emergency flushing, this section of the Permit requires Permittees to implement administrative BMPs such as source control measures, managerial practices, operations and maintenance procedures or other measures to reduce or prevent potential pollutants from being discharged during these events. This Provision also contains specific notification and monitoring requirements to assess immediate and continued impacts to water quality when these events happen.

This section of the Permit acknowledges that in cases of emergency discharge, such as from firefighting and disasters, priority of efforts shall be directed toward life, property, and the environment, in that order. Therefore, Permittees are required to implement BMPs that do not interfere with immediate emergency response operations or impact public health and safety. Reporting requirements for such events shall be determined by Water Board staff on a case-by-case basis.

Provision C.15.b.iv. Individual Residential Car Washing. Soaps and automotive pollutants such as oil and metals can be discharged into storm drains and waterbodies from individual residential car washing activities. However, it is not feasible to prohibit individual residential car washing because it would require too much resources for the Permittees to regulate the prohibition. This section of the Permit requires Permittees to encourage residents to implement BMPs such as directing car washwaters to landscaped areas, using as little detergent as possible, and washing cars at commercial car washing facilities.

Provision C.15.b.v. Swimming Pool, Hot tub, Spa, and Fountain Water Discharges. These types of discharges can potentially contain high levels of chlorine and copper. Permittees shall prohibit the discharge of such waters that contain chlorine residual, copper algaecide, filter backwash, or other pollutants to the storm drains or to waterbodies. High flow rates into the storm drain or waterbody could cause erosion and scouring of the stream or creek banks. These types of discharges should be directed to landscaped areas large enough to accommodate the volume or to the sanitary sewer, with the local sanitary sewer's approval. If these discharge options are not feasible and the swimming pool, hot tub, spa, or fountain water discharges must enter the storm drain, they must be dechlorinated to non-detectable levels of chlorine and they must not contain copper algaecide. Flow rate should be regulated to minimize downstream erosion and scouring. We strongly encourage local sanitary sewer agencies to accept these types of non-stormwater discharges, especially for new and rebuilt ones where a connection could be achieved with marginal effort. This Provision also requires Permittees to coordinate with local sanitary agencies in these efforts.

Provision C.15.b.v.i. Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering. Fertilizers and pesticides can be washed off of landscaping and discharged into storm drains and waterbodies. However, it is not feasible to prohibit excessive irrigation because it would require too much resource for the Permittees to regulate such a prohibition. It is also not feasible for individual Permittees to ban the use fertilizers and pesticides. This section of the Permit requires Permittees to promote and/or work with potable water purveyors to promote measures that minimize runoff and pollutant loading from excess irrigation, such as conservation programs, outreach regarding overwatering and less toxic options for pest control and landscape management, the use of drought tolerant and native vegetation, and to implement appropriate illicit discharge response and enforcement for ongoing, large-volume landscape irrigation runoff to the storm drains.

Provision C.15.b.vii. requires Permittees to identify and describe additional types and categories of discharges not listed in Provision C.15.b., that they propose to conditionally exempt from Prohibition A.1., in periodic submittals to the Executive Officer.

Provision C.15.b.viii. establishes a mechanism to authorize under the Permit non-stormwater discharges owned or operated by the Permittees.

Attachment J: Standard NPDES Stormwater Permit Provisions

The following legal authority applies to Attachment J:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, D, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Standard provisions, reporting requirements, and notifications are consistent to all NPDES permits and are generally found in federal NPDES regulation 40 CFR 122.41.

Attachment J includes Standard Provisions. These Standard Provisions ensure that NPDES stormwater permits are consistent and compatible with USEPA's federal regulations. Some Standard Provision sections specific to publicly owned sewage treatment works are not included in Attachment J.

Fact Sheet Attachment 6.1

Construction Inspection Data

Construction Inspection Data

Facility/Site Inspected	Inspection Date	Weather During Inspection	Inches of Rain Since Last Inspection	Enforcement Response Level	Problem(s) Observed							Specific Problem(s)	Resolution			Comments/ Rationale for Longer Compliance Time
					Erosion Control	Runon and Runoff Control	Sediment Control	Active Treatment System	Good Site Management	Non Stormwater Management	Illicit Discharge		Problems Fixed	Need More Time	Escalate Enforcement	
Panoramic Views	9/30/08	Dry	0	Written Notice			x					Driveway not stabilized				
Panoramic Views	10/15/08	Dry	0.5										x			50' of driveway rocked.
Panoramic Views	11/15/08	Rain	3	Stop Work	x		x				x	Uncovered graded lots eroding; Sediment entering a stormdrain that didn't have adequate protection.				
Panoramic Views	11/15/08	Drizzling	0.25										x			Lots blanketed. Storm drains pumped. Street cleaned.
Panoramic Views	12/1/08	Dry	4	Verbal Warning					x			Porta potty next to stormdrain.	x			Porta potty moved away from stormdrain.
Panoramic Views	1/15/08	Rain	3.25	Written Warning	x						x	Fiber rolls need maintenance; Tire wash water flowing into street				
Panoramic Views	1/25/09	Dry	0										x			Fiber rolls replaced.

Facility/Site Inspected	Inspection Date	Weather During Inspection	Inches of Rain Since Last Inspection	Enforcement Response Level	Problem(s) Observed							Specific Problem(s)	Resolution			Comments/ Rationale for Longer Compliance Time	
					Erosion Control	Runon and Runoff Control	Sediment Control	Active Treatment System	Good Site Management	Non Stormwater Management	Illicit Discharge		Problems Fixed	Need More Time	Escalate Enforcement		
Panoramic Views	2/28/09	Rain	2.4	Stop Work	x		x					x	Slope erosion control failed. Fiber rolls at the bottom of the hill flattened. Sediment laden discharge skipping protected stormdrains and entering unprotected stormdrains.				
Panoramic Views	2/28/09	Rain	0.1											x			Fiber rolls replaced. Silt fences added. More stormdrains protected. Streets cleaned. Slope too soggy to access.
Panoramic Views	3/15/09	Dry	1	Citation with Fine					x		x	Paint brush washing not designated	x				Street and storm drains cleaned. Slopes blanketed.
Panoramic Views	4/1/09	Dry	0.5	Citation with Fine							x	Concrete washout overflowed; Evidence of illicit discharge					
Panoramic Views	4/15/09	Dry	0										x				Concrete washout replaced; Storm drain and line cleaned.

Fact Sheet Attachment 10.1

303(d) Trash Resolution and Staff Report February 2009

Available at

http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2009/R2-2009-0008.pdf

ATTACHMENT A

Provision C.3.b. Sample Reporting Table

**Provision C.3.b. Sample Reporting Table
Regulated Projects Approved During the Reporting Period 07/08 to 06/09
City of Eden Annual Report FY 2008-09**

Project Name, Project Number, Location, Street Address,	Name of Developer, Project Phase No., ¹ Project Type & Description	Project Watershed ²	Total Site Area, Total Area of Land Disturbed	Total New and/or Replaced Impervious Surface Area ³	Total Pre- and Post-Project Impervious Surface Area ⁴	Status of Project ⁵	Source Control Measures	Site Design Measures	Treatment Systems Installed ⁶	Operation & Maintenance Responsibility Mechanism	Hydraulic Sizing Criteria	Alternative Compliance Measures ^{7,8}	HM Controls ^{9,10}
Private Projects													
Nirvana Estates; Project #05-122; Property bounded by Paradise Lane, Serenity Drive, and Eternity Circle; Eden, CA	Heavenly Homes; Phase 1; Construction of 156 single-family homes and 45 townhomes with commercial shops and underground parking.	Runoff from site drains to Babbling Brook	25 acres site area, 21 acres disturbed	20 acres new	20 acres post-project	Application submitted 12/29/07, Application deemed complete 1/30/08, Project approved 7/16/08	Stenciled inlets, street sweeping, covered parking, car wash pad drains to sanitary sewer	Pervious pavement for all driveways, sidewalks, and commercial plaza	vegetated swales, detention basins,	Conditions of Approval require Homeowners Association to perform regular maintenance. Written record will be made available to City inspectors.	WEF Method	n/a	Contra Costa sizing charts used to design detention basin at Peace Park. Also contributed to in-stream projects in Babbling Brook
Barter Heaven; Project #05-345; Shoppers Lane & Bargain Avenue; 14578 Shoppers Lane, Eden, CA	Deals Galore Development Co.; Demolition of strip mall and parking lot and construction of 500-unit 5-story shopping mall with underground parking and limited outdoor parking.	Runoff from site drains to Bargain River	5 acres site area, 3 acres disturbed	1 acre new, 2 acres replaced	3.5 acres pre-project, 4.5 acres post-project	Application submitted 7/9/08, Application deemed complete 8/2/08, Project approved 12/12/08	Stenciled inlets, trash enclosures, underground parking, street sweeping	One-way aisles to minimize outdoor parking footprint; roof drains to planter boxes	tree wells with bioretention; planter boxes with bioretention	Conditions of Approval require property owner (landlord) to perform regular maintenance. Written record will be made available to City inspectors.	BMP Handbook Method	\$ 250,000 paid to Renew Regional Project sponsored by Riverworks Foundation, 243 Water Way, Eden, CA 408-345-6789	Renew Project includes treatment and HM Controls

**Provision C.3.b. Sample Reporting Table
Regulated Projects Approved During the Reporting Period 07/08 to 06/09
City of Eden Annual Report FY 2008-09**

Project Name, Project Number, Location, Street Address,	Name of Developer, Project Phase No., ¹ Project Type & Description	Project Watershed ²	Total Site Area, Total Area of Land Disturbed	Total New and/or Replaced Impervious Surface Area ³	Total Pre- and Post-Project Impervious Surface Area ⁴	Status of Project ⁵	Source Control Measures	Site Design Measures	Treatment Systems Installed ⁶	Operation & Maintenance Responsibility Mechanism	Hydraulic Sizing Criteria	Alternative Compliance Measures ^{7,8}	HM Controls ^{9,10}
New Beginnings; Project No. #05-456; Hope Street & Chance Road; 567 Hope Boulevard, Eden, CA	Fresh Start Corporation; Demolition of abandoned warehouse and construction of a 5-story building with 250 low-income rental housing units.	Runoff from site drains to Poor Man Creek	5 acres site area, 100,000 ft ² disturbed	1 acre replaced	2 acres pre-project, 1 acre post-project	Application submitted 2/9/09, Application deemed complete 4/10/09; Project approved 6/30/09	Trash enclosures, underground parking, street sweeping, car wash pad drains to sanitary sewer	roof drains to landscaping	parking runoff flows to six bioretention units/gardens	Conditions of Approval require property owner (landlord) to perform regular maintenance. Written record will be made available to City inspectors.	BMP Handbook Method	n/a	n/a
Public Projects													
Gridlock Relief, Project No. #05-99, ABC Blvd between Main and Huett Streets, Eden, CA	City of Eden. Widening of ABC Blvd from 4 to 6 lanes	Runoff from site drains to Congestion River	6 acres site area, 3 acres disturbed	2 acres new, 1 acre replaced	4 acres pre-project, 6 acres post-project	Application submitted 7/9/06, Application deemed complete 10/6/08, Project approved 12/9/08, Construction scheduled to begin 7/10/09	none	ABC Blvd sloped to drain runoff into landscaped areas in median	Runoff leaving underdrain system of landscaped median is pumped to bioretention gardens along either side of ABC Blvd	Signed statement from City of Eden assuming post-construction responsibility for treatment BMP maintenance.	WEF Method	n/a	BAHM used to design and size stormwater treatment units so that increased runoff is detained.

Sample Reporting Table C.3.b. Footnotes

1. If a project is being constructed in Phases, use a separate row entry for each Phase.
2. State the watershed(s) that the Regulated Project drains to. Optional but recommended: Also state the downstream watershed(s).
3. State both the total new impervious surface area and the total replaced impervious surface area, as applicable.
4. For redevelopment projects state both the pre-project impervious surface area and the post-project impervious surface area.
5. State project application date; application deemed complete date; and final, major, staff-level discretionary review and approval date.
6. List stormwater treatment system(s) installed onsite or at a joint stormwater treatment system facility.
7. For Alternative Compliance at an offsite location in accordance with Provision C.3.e.i.(1), on a separate page, give a discussion of the alternative compliance site including the information specified in Provision C.3.b.v.(1)(m)(i) for the offsite project.
8. For Alternative Compliance by paying in-lieu fees in accordance with Provision C.3.e.i.(2), on a separate page, provide the information specified in Provision C.3.b.v.(1)(m)(ii) for the Regional Project.
9. If HM control is not required, state why not.
10. If HM control is required, state control method used (e.g., method to design and size device(s) or method(s) used to meet the HM Standard, and description of device(s) or method(s) used, such as detention basin(s), bioretention unit(s), regional detention basin, or in-stream control).

Instructions for Provision C.3.b. Sample Reporting Table

1. **Project Name, Number, Location, and Street Address** – Include the following information:
 - Name of the project
 - Number of the project (if applicable)
 - Location of the project with cross streets
 - Street address of the project (if available)

2. **Name of Developer, Project Phase Number, Project Type, and Project Description** – Include the following information:
 - Name of the developer
 - Project phase name and/or number (only if the project is being developed in phases) – each phase should have a separate row entry
 - Type of development (i.e., new and/or redevelopment)
 - Description of development (e.g., 5-story office building, residential with 160 single-family homes with five 4-story buildings to contain 200 condominiums, 100 unit 2-story shopping mall, mixed use retail and residential development (apartments), industrial warehouse)

3. **Project Watershed**
 - State the watershed(s) that the Project drains into
 - Optional but recommended: Also state the downstream watershed(s)

4. **Total Site Area and Total Area of Land Disturbed** – State the total site area and the total area of land disturbed.

5. **Total New and/or Replaced Impervious Surface Area**
 - State the total new impervious surface area
 - State the total replaced impervious surface area, as applicable

6. **Total Pre- and Post-Project Impervious Surface Area** – For redevelopment projects, state both the pre-project impervious surface area and the post-project impervious surface area.

7. **Status of Project** – Include the following information:
 - Project application submittal date
 - Project application deemed complete date
 - Final, major, staff-level discretionary review and approval date

8. **Source Control Measures** – List all source control measures that have been or will be included in the project.

9. **Site Design Measures** – List all site design measures that have been or will be included in the project.
10. **Treatment Systems Installed** – List all post-construction stormwater treatment system(s) installed onsite and/or at a joint stormwater treatment system facility.
11. **Operation and Maintenance Responsibility Mechanism** – List the legal mechanism(s) that have been or will be used to assign responsibility for the maintenance of the post-construction stormwater treatment systems.
12. **Hydraulic Sizing Criteria Used** – List the hydraulic sizing criteria used for the Project.
13. **Alternative Compliance Measures**
 - **Option 1: LID Treatment at an Offsite Location (Provision C.3.e.i.(1))** – On a separate page, give a discussion of the alternative compliance project including the information specified in Provision C.3.b.v.(1)(m)(i) for the offsite project.
 - **Option 2: Payment of In-Lieu Fees (Provision C.3.e.i.(2))** – On a separate page, provide the information specified in Provision C.3.b.v.(1)(m)(ii).
14. **HM Controls**
 - If HM control is not required, state why not
 - If HM control is required, state control method used (e.g., method to design and size device(s), method(s) used to meet the HM Standard, and description of device(s) or method(s) used, such as detention basin(s), bioretention unit(s), regional detention basins, or in-stream control)

ATTACHMENT B

Provision C.3.g. Alameda Permittees Hydromodification Management Requirements

Alameda Permittees Hydromodification Management Requirements

1. On-site and Regional Hydromodification Management (HM) Control Design Criteria

- a. *Range of flows to control:* Flow duration controls shall be designed such that post-project stormwater discharge rates and durations match pre-project discharge rates and durations from 10 percent of the pre-project 2-year peak flow¹²³ up to the pre-project 10-year peak flow, except where the lower endpoint of this range is modified as described in Section 6 of this Attachment.
- b. *Goodness of fit criteria:* The post-project flow duration curve shall not deviate above the pre-project flow duration curve by more than 10 percent over more than 10 percent of the length of the curve corresponding to the range of flows to control.
- c. *Allowable low flow rate:* Flow control structures may be designed to discharge stormwater at a very low rate that does not threaten to erode the receiving waterbody. This flow rate (also called Q_{cp} ¹²⁴) shall be no greater than 10 percent of the pre-project 2-year peak flow unless a modified value is substantiated by analysis of actual channel resistance in accordance with an approved User Guide as described in Section 6 of this Attachment.
- d. *Standard HM modeling:* On-site and regional HM controls designed using the Bay Area Hydrology Model (BAHM¹²⁵) and site-specific input data shall be considered to meet the HM Standard. Such use must be consistent with directions and options set forth in the most current BAHM User's Manual.¹²⁶ Permittees shall demonstrate to the satisfaction of the Executive Officer that any modifications of the BAHM made are consistent with the requirements of this Attachment and Provision C.3.f.
- e. *Alternate HM modeling and design:* The project proponent may use a continuous simulation hydrologic computer model¹²⁷ to simulate pre-project and post-project runoff and to design HM controls. To use this method, the project proponent shall compare the

¹²³ Where referred to in this Order, the 2-year peak flow is determined using a flood frequency analysis procedure based on USGS Bulletin 17 B to obtain the peak flow statistically expected to occur at a 2-year recurrence interval. In this analysis, the appropriate record of hourly rainfall data (e.g., 35–50 years of data) is run through a continuous simulation hydrologic model, the annual peak flows are identified, rank ordered, and the 2-year peak flow is estimated. Such models include USEPA's Hydrologic Simulation Program—Fortran (HSPF), U.S. Army Corps of Engineers' Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS), and USEPA's Storm Water Management Model (SWMM).

¹²⁴ Q_{cp} is the allowable low flow discharge from a flow control structure on a project site. It is a means of apportioning the critical flow in a stream to individual projects that discharge to that stream, such that cumulative discharges do not exceed the critical flow in the stream.

¹²⁵ *The Bay Area Hydrology Model – A Tool for Analyzing Hydromodification Effects of Development Projects and Sizing Solutions*, Bicknell, J., D. Beyerlein, and A. Feng, September 26, 2006. Available at http://www.scvurppp-w2k.com/permit_c3_docs/Bicknell-Beyerlein-Feng_CASQA_Paper_9-26-06.pdf

¹²⁶ *The Bay Area Hydrology Model – A Tool for Analyzing Hydromodification Effects of Development Projects and Sizing Solutions*, Bicknell, J., D. Beyerlein, and A. Feng, September 26, 2006. Available at http://www.scvurppp-w2k.com/permit_c3_docs/Bicknell-Beyerlein-Feng_CASQA_Paper_9-26-06.pdf

¹²⁷ Such models include US EPA's Hydrologic Simulation Program—Fortran (HSPF), U.S. Army Corps of Engineers Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS), and USEPA's Surface Water Management Model (SWMM).

pre-project and post-project model output for a rainfall record of at least 30 years, and shall show that all applicable performance criteria in 1.a-e above are met.

2. Impracticability Provision

Where conditions (e.g., extreme space limitations) prevent a project from meeting the HM Standard for a reasonable cost, *and* where the project's runoff cannot be directed to a regional HM control within a reasonable time frame, *and* where an in-stream measure is not practicable, the project shall use (1) site design for hydrologic source control, *and* (2) stormwater treatment measures that collectively minimize, slow, and detain¹²⁸ runoff to the maximum extent practicable. In addition, the project proponent shall provide for or contribute financially to an alternative HM project as set forth below:

- a. *Reasonable cost:* To show that the HM Standard cannot be met at a reasonable cost, the project proponent must demonstrate that the total cost to comply with both the HM Standard and the Provision C.3.d treatment requirement exceeds 2 percent of the project construction cost, excluding land costs. Costs of HM and treatment control measures shall not include land costs, soil disposal fees, hauling, contaminated soil testing, mitigation, disposal, or other normal site enhancement costs such as landscaping or grading that are required for other development purposes.
- b. *Regional HM controls:* A regional HM control shall be considered available if there is a planned location for the regional HM control and if an appropriate funding mechanism for a regional HM control is in place by the time of project construction.
- c. *In-stream measures practicability:* In-stream measures shall be considered practicable when an in-stream measure for the project's watershed is planned and an appropriate funding mechanism for an in-stream measure is in place by the time of project construction.
- d. *Financial contribution to an alternative HM project:* The difference between 2 percent of the project construction costs and the cost of the treatment measures at the site (both costs as described in Section 2.a of this Attachment) shall be contributed to an alternative HM project, such as a stormwater treatment retrofit, HM retrofit, regional HM control, or in-stream measure that is not otherwise required by the Water Board or other regulatory agency. Preference shall be given to projects discharging, in this order, to the same tributary, mainstem, watershed, then in the same municipality or county.

3. Record Keeping

Permittees shall collect and retain the following information for all projects subject to HM requirements:

- a. Site plans identifying impervious areas, surface flow directions for the entire site, and location(s) of HM measures;
- b. For projects using standard sizing charts, a summary of sizing calculations used;
- c. For projects using the BAHM, a listing of model inputs;

¹²⁸ Stormwater treatment measures that detain runoff are generally those that filter runoff through soil or other media and include bioretention units, bioswales, basins, planter boxes, tree wells, media filters, and green roofs.

- d. For projects using custom modeling, a summary of the modeling calculations with corresponding graph showing curve matching (existing, post-project, and post-project with HM controls curves);
- e. For projects using the Impracticability Provision, a listing of all applicable costs and a brief description of the alternative HM Project (name, location, date of start up, entity responsible for maintenance); and
- f. A listing, summary, and date of modifications made to the BAHM, including technical rationale. Permittees shall submit this list and explanation annually with the Annual Report. This may be prepared at the Countywide Program level and submitted on behalf of participating Permittees.

4. HM Control Areas

Applicable projects shall be required to meet the HM Standard when such projects are in areas of HM applicability shown in the Alameda Permittees' HM Map.¹²⁹ (available at http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/muni/mrp/Final%20TO%20HM%20Maps.pdf). Plans to restore a creek reach may reintroduce the applicability of HM requirements; in these instances, Permittees may add, but shall not delete, areas of applicability accordingly.

To assist in location and evaluation of project applicability, the Alameda Permittees' HM Map depicts a number of features including the following:

- Hardened channels and culverts at least 24 inches in diameter (green solid or dashed lines);
- Natural channels (red lines);
- Boundaries of major watersheds (light blue lines); and
- Surface streets and highways (gray or black lines).

These data are of varying age, precision and accuracy and are not intended for legal description or engineering design. Watersheds extending beyond the County boundaries are shown for illustration purposes only. Project proponents are responsible for verifying and describing actual conditions of site location and drainage.

5. Alameda Permittees' HM Map is color-coded as follows:

- a. **Solid pink areas** – Solid pink designates hilly areas, where high slopes (greater than 25 percent) occur. The HM Standard and all associated requirements apply in areas shown in solid pink on the map. In this area, the HM Standard does *not* apply if a project proponent demonstrates that all project runoff will flow through enclosed storm drains, existing concrete culverts, or fully hardened (with bed and banks continuously concrete-lined) channels to the tidal area shown in light gray.
- b. **Purple/red hatched areas** – These are upstream of areas where hydromodification impacts are of concern because of factors such as bank instability, sensitive habitat, or restoration projects. The HM Standard and all associated requirements apply in areas

¹²⁹ The watercourses potentially susceptible to hydromodification impacts are identified based on an assessment approach developed by Balance Hydrologics (2003).

shown in purple/red (printer-dependant) hatch marking on the map. Projects in these areas may be subject to additional agency reviews related to hydrologic, habitat or other watershed-specific concerns.

- c. **Solid white areas** – Solid white designates the land area between the hills and the tidal zone. This area may be susceptible to hydromodification unless the site is connected to storm drains that discharge to the tidal area. The HM Standard and all associated requirements apply to projects in solid white areas *unless* a project proponent demonstrates that all project runoff will flow through fully hardened channels.¹³⁰ Short segments of engineered earthen channels (length less than 10 times the maximum width of trapezoidal cross-section) can be considered resistant to erosion if located downstream of a concrete channel of similar or greater length and comparable cross-sectional dimensions. Plans to restore a hardened channel may affect the HM Standard applicability in this area.
- d. **Solid gray areas** – Solid gray designates areas where streams or channels are tidally influenced or primarily depositional near their outfall in San Francisco Bay. The HM Standard does not apply to projects in this area. Plans to restore a hardened channel may affect the HM Standard applicability in this area.
- e. **Dark gray, Eastern County area** – Dark gray designates the portion of eastern Alameda County that lies outside the discharge area of this NPDES permit. This area is in the Central Valley Regional Water Quality Control Board's jurisdiction.

6. Potential Exceptions to Alameda Permittees' HM Map Designations

The Program may choose to prepare a User Guide¹³¹ to be used for evaluating individual receiving waterbodies using detailed methods to assess channel stability and watercourse critical flow. This User Guide would reiterate and collate established stream stability assessment methods that have been presented in the Program's HMP.¹³² After the Program has collated its methods into a User Guide format, received approval of the User Guide from the Executive Officer,¹³³ and informed the public through such process as an electronic mailing list, the Permittees may use the User Guide to guide preparation of technical reports for the following: implementing the HM Standard using in-stream or regional HM controls; determining whether certain projects are discharging to a watercourse that is less susceptible (from point of discharge to the Bay) to hydromodification (e.g., would have a lower potential for erosion than set forth in these requirements); and/or determining if a watercourse has a higher critical flow and project(s) discharging to it are eligible for an alternative Qcp for the purpose of designing on-site or regional measures to control flows draining to these channels (i.e., the actual threshold of erosion-causing critical flow is higher than 10 percent of the 2-year pre-project flow). In no case shall the design value of Qcp exceed 50 percent of the 2-year pre-project flow.

¹³⁰ In this paragraph, *fully hardened channels* include enclosed storm drains, existing concrete culverts, or channels whose bed and banks are continuously concrete-lined to the tidal area shown in light gray on the map.

¹³¹ The User Guide may be offered under a different title.

¹³² The Program's HMP has undergone Water Board staff review and been subject to public notice and comment.

¹³³ The User Guide shall not introduce a new concept, but rather reformat existing methods; therefore, Executive Officer approval is appropriate.

ATTACHMENT C

Provision C.3.g. Contra Costa Permittees Hydromodification Management Requirements

Contra Costa Permittees Hydromodification Management Requirements

1. Demonstrating Compliance with the Hydromodification Management (HM) Standard

Contra Costa Permittees shall ensure that project proponents shall demonstrate compliance with the HM Standard by demonstrating that any one of the following four options is met:

- a. *No increase in impervious area.* The project proponent may compare the project design to the pre-project condition and show that the project will not increase impervious area and also will not facilitate the efficiency of drainage collection and conveyance.
- b. *Implementation of hydrograph modification IMPs.* The project proponent may select and size IMPs to manage hydrograph modification impacts, using the design procedure, criteria, and sizing factors specified in the Contra Costa Clean Water Program's *Stormwater C.3 Guidebook*. The use of flow-through planters shall be limited to upper-story plazas, adjacent to building foundations, on slopes where infiltration could impair geotechnical stability, or in similar situations where geotechnical issues prevent use of IMPs that allow infiltration to native soils. Limited soil infiltration capacity in itself does not make use of other IMPs infeasible.
- c. *Estimated post-project runoff durations and peak flows do not exceed pre-project durations and peak flows.* The project proponent may use a continuous simulation hydrologic computer model such as USEPA's Hydrograph Simulation Program—Fortran (HSPF) to simulate pre-project and post-project runoff, including the effect of proposed IMPs, detention basins, or other stormwater management facilities. To use this method, the project proponent shall compare the pre-project and post-project model output for a rainfall record of at least 30 years, using limitations and instructions provided in the Program's *Stormwater C.3 Guidebook*, and shall show that the following criteria are met:
 - i. For flow rates from 10 percent of the pre-project 2-year runoff event (0.1Q₂) to the pre-project 10-year runoff event (Q₁₀), the post-project discharge rates and durations shall not deviate above the pre-project rates and durations by more than 10 percent over more than 10 percent of the length of the flow duration curve.
 - ii. For flow rates from 0.5Q₂ to Q₂, the post-project *peak flows* shall not exceed pre-project peak flows. For flow rates from Q₂ to Q₁₀, post-project peak flows may exceed pre-project flows by up to 10 percent for a 1-year frequency interval. For example, post-project flows could exceed pre-project flows by up to 10 percent for the interval from Q₉ to Q₁₀ or from Q_{5.5} to Q_{6.5}, but not from Q₈ to Q₁₀.

d. *Projected increases in runoff peaks and durations will not accelerate erosion of receiving stream reaches.* The project proponent may show that, because of the specific characteristics of the stream receiving runoff from the project site, or because of proposed stream restoration projects, or both, there is little likelihood that the cumulative impacts from new development could increase the net rate of stream erosion to the extent that beneficial uses would be significantly impacted. To use this option, the project proponent shall evaluate the receiving stream to determine the relative risk of erosion impacts and take the appropriate actions as described below and in Table A-1. Projects 20 acres or larger in total area shall not use the medium risk methodology in (d)ii below.

i. **Low Risk.** In a report or letter report, signed by an engineer or qualified environmental professional, the project proponent shall show that all downstream channels between the project site and the Bay/Delta fall into one of the following *low-risk* categories.

(1) Enclosed pipes.

(2) Channels with continuous hardened beds and banks engineered to withstand erosive forces and composed of concrete, engineered riprap, sackcrete, gabions, mats, and such. This category excludes channels where hardened beds and banks are not engineered continuous installations (i.e., have been installed in response to localized bank failure or erosion).

(3) Channels subject to tidal action.

(4) Channels shown to be aggrading (i.e., consistently subject to accumulation of sediments over decades) and to have no indications of erosion on the channel banks.

ii. **Medium Risk.** Medium risk channels are those where the boundary shear stress could exceed critical shear stress as a result of hydrograph modification but where either the sensitivity of the boundary shear stress to flow is low (e.g., an oversized channel with high width to depth ratios) or where the resistance of the channel materials is relatively high (e.g., cobble or boulder beds and vegetated banks). In *medium-risk* channels, accelerated erosion due to increased watershed imperviousness is not likely but is possible, and the uncertainties can be more easily and effectively addressed by mitigation than by additional study.

In a preliminary report, the project proponent's engineer or qualified environmental professional shall apply the Program's *Basic Geomorphic Assessment*¹³⁴ methods and criteria to show each downstream reach between the project site and the Bay/Delta is either at *low-risk* or *medium-risk* of accelerated erosion due to watershed development. In a following, detailed report, a qualified stream geomorphologist¹³⁵ shall use the Program's Basic Geomorphic Assessment methods and criteria, available information, and current field data to evaluate each *medium-risk* reach. For each *medium-risk* reach, the detailed report shall show one of the following:

¹³⁴ Contra Costa Clean Water Program *Hydrograph Modification Management Plan*, May 15, 2005, Attachment 4, pp. 6-13. This method must be made available in the Program's *Stormwater C.3 Guidebook*.

¹³⁵ Typically, detailed studies will be conducted by a stream geomorphologist retained by the lead agency (or, on the lead agency's request, another public agency such as the Contra Costa County Flood Control and Water Conservation District) and paid for by the project proponent.

- (1) A detailed analysis, using the Program's criteria, showing the particular reach may be reclassified as *low-risk*.
 - (2) A detailed analysis, using the Program's criteria, confirming the *medium-risk* classification, and:
 - (a) A preliminary plan for a mitigation project for that reach to stabilize stream beds or banks, improve natural stream functions, and/or improve habitat values, and
 - (b) A commitment to implement the mitigation project timely in connection with the proposed development project (including milestones, schedule, cost estimates, and funding), and
 - (c) An opinion and supporting analysis by one or more qualified environmental professionals that the expected environmental benefits of the mitigation project substantially outweigh the potential impacts of an increase in runoff from the development project, and
 - (d) Communication, in the form of letters or meeting notes, indicating consensus among staff representatives of regulatory agencies having jurisdiction that the mitigation project is feasible and desirable. In the case of the Regional Water Board, this must be a letter, signed by the Executive Officer or designee, specifically referencing this requirement. (This is a preliminary indication of feasibility required as part of the development project's Stormwater Control Plan. All applicable permits must be obtained before the mitigation project can be implemented.)
- iii. High Risk.** High-risk channels are those where the sensitivity of boundary shear stress to flow is high (e.g., incised or entrenched channels, channels with low width-to-depth ratios, and narrow channels with levees) or where channel resistance is low (e.g., channels with fine-grained, erodible beds and banks, or with little bed or bank vegetation). In a *high-risk* channel, it is presumed that increases in runoff flows will accelerate bed and bank erosion.

To implement this option (i.e., to allow increased runoff peaks and durations to a high-risk channel), the project proponent must perform a comprehensive analysis to determine the design objectives for channel restoration and must propose a comprehensive program of in-stream measures to improve channel functions while accommodating increased flows. Specific requirements are developed case-by-case in consultation with regulatory agencies having jurisdiction. The analysis will typically involve watershed-scale continuous hydrologic modeling (including calibration with stream gauge data where possible) of pre-project and post-project runoff flows, sediment transport modeling, collection and/or analysis of field data to characterize channel morphology including analysis of bed and bank materials and bank vegetation, selection and design of in-stream structures, and project environmental permitting.

2. IMP Model Calibration and Validation

The Program shall monitor flow from Hydrograph Modification Integrated Management Practices (IMPs) to determine the accuracy of its model inputs and assumptions. Monitoring

shall be conducted with the aim of evaluating flow control effectiveness of the IMPs. The Program shall implement monitoring where feasible at future new development projects to gain insight into actual versus predicted rates and durations of flow from IMP overflows and underdrains.

At a minimum, Permittees shall monitor five locations for a minimum of two rainy seasons. If two rainy seasons are not sufficient to collect enough data to determine the accuracy of model inputs and assumptions, monitoring shall continue until such time as adequate data are collected.

Permittees shall conduct the IMP monitoring as described in the IMP Model Calibration and Validation Plan in Section 5 of this Attachment. Monitoring results shall be submitted to the Executive Officer by June 15 of each year following collection of monitoring data. If the first year's data indicate IMPs are not effectively controlling flows as modeled in the HMP, the Executive Officer may require the Program to make adjustments to the IMP sizing factors or design, or otherwise take appropriate corrective action. The Permittees shall submit an IMP Monitoring Report by August 30 of the second year¹³⁶ of monitoring. The IMP Monitoring Report shall contain, at a minimum, all the data, graphic output from model runs, and a listing of all model outputs to be adjusted, with full explanation for each. Board staff will review the IMP Monitoring Report and require the Program to make any appropriate changes to the model within a 3-month time frame.

3. Stormwater C.3 Guidebook and IMP Design Criteria

The Current Contra Costa Clean Water Program C.3 Guidebook, 4th Edition (September 2008) shall be implemented until the expiration of this permit (November 2014). Any significant changes in the designs of the IMPs, their sizing factors or manner of implementation shall be approved by the Water Board.

4. IMP Model Calibration and Validation Plan Objective

Monitoring shall be conducted with the aim of evaluating flow control effectiveness of the IMPs. The IMPs were redesigned in 2008 to meet a low flow criterion of 0.2Q2, not 0.1Q2, which is current HMP standard for Contra Costa County. The Program shall implement monitoring at future new development projects at a minimum of five locations and for a minimum of two rainy seasons to gain insight into actual versus predicted rates and durations of flow from IMP overflows and underdrains. If two rainy seasons are not sufficient to collect enough data to determine the accuracy of model inputs and assumptions, monitoring shall continue until such time as adequate data are collected.

- a. The Dischargers Shall Identify and Establish Monitoring Sites – Program staff shall work with municipal Co-Permittees to identify potential monitoring sites on development projects that implement IMPs. Proposed sites shall be identified during review of planning and zoning applications so that monitoring stations can be designed and constructed as part of the development project. Monitoring shall begin after the development project is complete and the site is in use.**

Criteria for appropriate sites include, but are not limited to, the following:

¹³⁶ If the monitoring extends beyond 2 years, an IMP Monitoring Report shall be submitted by August 30 annually until model calibration and validation is complete.

- To ensure applicability of results, the development project and IMPs should be typical of development sites and types of IMPs foreseen throughout the County. In particular, at least one each of the infiltration planter, flow-through planter, and *dry* swale shall be selected for monitoring.
 - The area tributary to the IMP should be clearly defined, should contain and direct runoff at all rainfall intensities to the IMP. Two monitoring locations shall contain tributary areas that are a mix of pervious and impervious areas to test the pervious area simplifying assumptions used in the HMP, Table 14, Attachment 2, page 49. If no such locations are constructed by the monitoring period, modeling of mixed (pervious and impervious) tributary areas can substitute for direct monitoring of this type of location.
 - The site shall be easily accessible at all times of day and night to allow inspection and maintenance of measurement equipment.
 - Hourly rain gauge data representative of the site's location shall be available.
- b. Documentation of Monitoring Sites** – The Dischargers shall record and report (i.e., document) pertinent information for each monitoring site. Documentation of each monitoring site shall include the following:
- Amount of tributary area;
 - Condition of roof or paving;
 - Grading and drainage to the IMP, including calculated time of concentration.
 - Locations and elevations of inlets and outlets;
 - As-built measurements of the IMP including depth of soil and gravel layers, height of underdrain pipe above the IMP floor or native soil;
 - Detailed specifications of soil and gravel layers and of filter fabric and other appurtenances; and
 - Condition of IMP surface soils and vegetation.
- c. Design, Construction, and Operation of Monitoring Sites** – The Dischargers shall ensure that IMPs selected for monitoring are equipped with a manhole, vault, or other means to install and access equipment for monitoring flows from IMP overflows and underdrains.

Development of suitable methods for monitoring the entire range of flows may require experiment. The Program and Water Board are interested in the timing and duration of very low flows from underdrains, as well as higher flows from IMP overflows. The Dischargers shall ensure that equipment is configured to measure the entire range of flows and to avoid potential clogging of orifices used to measure low flows.

The Dischargers shall ensure that construction of IMPs is inspected carefully to ensure that IMPs are installed as designed and to avoid potential operational problems. For example, gravel used for underdrain layers should be washed free of fines, and filter fabric should be installed without breaks.

The Dischargers shall ensure that, following construction, artificial flows are applied to the IMP to verify the IMP and monitoring equipment are operating correctly and to resolve any operational problems prior to measuring flows from actual rain storms.

The Dischargers shall ensure that monitoring equipment is properly maintained. Maintenance of monitoring equipment will require, initially, inspections during and after storms that produce runoff. The inspection and maintenance schedule may be adjusted as additional experience is gained.

- d. Data to be Obtained** – The Dischargers shall collect the following data for each IMP, during the monitoring period:
- Hourly rainfall and more frequent rainfall data where available;
 - Hourly IMP outflow and 15-minute outflow for all time periods in which sub-hourly rainfall data are available;
 - Hourly IMP inflow (if possible) and more frequent inflow (if possible) when sub-hourly rainfall data are available; and
 - Notes and observations.
- e. Evaluation of Data** – The principal use of the monitoring data shall be a comparison of predicted to actual flows. The Dischargers shall ensure that the HSPF model is set up as it was to prepare the curves in Attachment 2 of the HMP, with appropriate adjustments for the drainage area of the IMP to be monitored and for the actual sizing and configuration of the IMP. Hourly rainfall data from observed storms shall be input to the model, and the resulting hourly predicted output recorded. Where sub-hourly rainfall data are available, the model shall be run with, and output recorded for, 15-minute time steps.

The Dischargers shall compare predicted hourly outflows to the actual hourly outflows. As more data are gathered, the Dischargers may examine aggregated data to characterize deviations from predicted performance at various storm intensities and durations.

Because high-intensity storms are rare, it will take many years to obtain a suitable number of events to evaluate IMP performance under overflow conditions. Underdrain flows will occur more frequently, but possibly only a few times a year, depending on rainfall and IMP characteristics (e.g., extent to which the IMP is oversized, and actual, rather than predicted, permeability of native soils). However, evaluating a range of rainfall events that do *not* produce underflow will help demonstrate the effectiveness of the IMP.

5. Record Keeping and Reporting

Permittees shall collect and retain the following information for all projects subject to HM requirements:

- a. Site plans identifying impervious areas, surface flow directions for the entire site, and location(s) of HM measures;
- b. For projects using standard sizing charts, a summary of sizing calculations used;
- c. For projects using the BAHM, a listing of model inputs;

- d.** For projects using custom modeling, a summary of the modeling calculations with corresponding graph showing curve matching (existing, post-project, and post-project with HM controls curves);
 - e.** For projects using the Impracticability Provision, a listing of all applicable costs and a brief description of the alternative HM project (name, location, date of start up, entity responsible for maintenance); and
 - f.** A list and thorough technical explanation of any changes in design criteria for HM Controls, including IMPs. Permittees shall submit this list and explanation annually with the Annual Report.
- 6.** The current Contra Costa Clean Water Program C.3 Guidebook, 4th Edition (C.3 Guidebook) (September 2008) design approach and IMPs shall be used to comply with Provision C.3.g flow requirements until this permit expires and is reissued, pending model verification studies as described below. The IMPs shall be an implementation option as the flow control implementation for development projects up to a footprint of 30 acres

By April 1, 2014, the Contra Costa Clean Water Program shall submit a proposal containing one or a combination of the following three options (a.-c.) for implementation after the expiration and reissuance of this permit:

- a.** Present model verification monitoring results demonstrating that the IMPs are sufficiently oversized and perform to meet the 0.1Q2 low flow design criteria; or
- b.** Present study results of Contra Costa County streams geology and other factors that support the low flow design criteria of 0.2Q2 as the limiting HMP design low flow; or
- c.** Propose redesigns of the IMPs to meet the low flow design criteria of 0.1Q2 to be implemented during the next permit term.

ATTACHMENT D

Provision C.3.g. Fairfield-Suisun Permittees Hydromodification Management Requirements

Fairfield-Suisun Permittees Hydromodification Management Requirements

1. On-site and Regional Hydromodification Management (HM) Control Design Criteria

- a. *Range of flows to control:* Flow duration controls shall be designed such that post-project stormwater discharge rates and durations match pre-project discharge rates and durations from 20 percent of the pre-project 2-year peak flow¹³⁷ up to the pre-project 10-year peak flow.
- b. *Goodness of fit criteria:* The post-project flow duration curve shall not deviate above the pre-project flow duration curve by more than 10 percent over more than 10 percent of the length of the curve corresponding to the range of flows to control.
- c. *Allowable low flow rate:* Flow control structures may be designed to discharge stormwater at a very low rate that does not threaten to erode the receiving waterbody. This flow rate (also called Q_{cp} ¹³⁸) shall be no greater than 20 percent of the pre-project 2-year peak flow.
- d. *Standard HM modeling:* On-site and regional HM controls designed using the Bay Area Hydrology Model (BAHM¹³⁹) and site-specific input data shall be considered to meet the HM Standard. Such use must be consistent with directions and options set forth in the most current BAHM User Manual.¹⁴⁰ Permittees shall demonstrate to the satisfaction of the Executive Officer that any modifications of the BAHM made are consistent with this Attachment and Provision C.3.g.

¹³⁷ Where referred to in this Order, the 2-year peak flow is determined using a flood flow frequency analysis procedure based on USGS Bulletin 17 B to obtain the peak flow statistically expected to occur at a 2-year recurrence interval. In this analysis, the appropriate record of hourly rainfall data (e.g., 35–50 years of data) is run through a continuous simulation hydrologic model, the annual peak flows are identified, rank ordered, and the 2-year peak flow is estimated. Such models include USEPA's Hydrologic Simulation Program—Fortran (HSPF), U.S. Army Corps of Engineers' Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS), and USEPA's Storm Water Management Model (SWMM).

¹³⁸ Q_{cp} is the allowable low flow discharge from a flow control structure on a project site. It is a means of apportioning the critical flow in a stream to individual projects that discharge to that stream, such that cumulative discharges do not exceed the critical flow in the stream.

¹³⁹ See www.bayareahydrologymodel.org, Resources

¹⁴⁰ *The Bay Area Hydrology Model User Manual* is available at <http://www.bayareahydrologymodel.org/downloads.html>.

- e. *Alternate HM modeling and design:* The project proponent may use a continuous simulation hydrologic computer model¹⁴¹ to simulate pre-project and post-project runoff and to design HM controls. To use this method, the project proponent shall compare the pre-project and post-project model output for a rainfall record of at least 30 years, and shall show that all applicable performance criteria in 1.a–c above are met.
- f. *Sizing Charts:* The Program developed design procedures, criteria, and sizing factors for infiltration basins and bioretention units, based on a low flow rate that exceeds the allowable low flow rate. After the Program has modified its sizing factors¹⁴² to the allowable criteria, received approval of the modified sizing factors from the Executive Officer,¹⁴³ and informed the public through such mechanism as an electronic mailing list, project proponents may meet the HM Standard by using the Program’s design procedures, criteria, and sizing factors for infiltration basins and/or bioretention units.

2. Impracticability Provision

Where conditions (e.g., extreme space limitations) prevent a project from meeting the HM Standard for a reasonable cost, *and* where the project’s runoff cannot be directed to a regional HM control within a reasonable time frame, *and* where an in-stream measure is not practicable, the project shall use (1) site design for hydrologic source control, *and* (2) stormwater treatment measures that collectively minimize, slow, and detain¹⁴⁴ runoff to the maximum extent practicable. In addition, if the cost of providing site design for hydrologic source control and treatment measures to the maximum extent practicable does not exceed 2% of the project cost (as defined in “2.a.” below), the project proponent shall provide for or contribute financially to an alternative HM project as set forth below:

- a. *Reasonable cost:* To show that the HM Standard cannot be met at a reasonable cost, the project proponent must demonstrate that the total cost to comply with both the HM Standard and the Provision C.3.d. treatment requirement exceeds 2 percent of the project construction cost, excluding land costs. Costs of HM and treatment control measures shall not include land costs, soil disposal fees, hauling, contaminated soil testing, mitigation, disposal, or other normal site enhancement costs such as landscaping or grading that are required for other development purposes.
- b. *Regional HM controls:* A regional HM control shall be considered available if there is a planned location for the regional HM control and if an appropriate funding mechanism for a regional HM control is in place by the time of project construction.
- c. *In-stream measures practicability:* In-stream measures shall be considered practicable when an in-stream measure for the project’s watershed is planned and an appropriate funding mechanism for an in-stream measure is in place by the time of project construction.

¹⁴¹ Such models include USEPA’s Hydrologic Simulation Program—Fortran (HSPF), U.S. Army Corps of Engineers Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS), and USEPA’s Storm Water Management Model (SWMM).

¹⁴² Current sizing factors and design criteria are shown in Appendix D of the FSURMP HMP.

¹⁴³ The modified sizing factors will not introduce a new concept but rather make an existing compliance mechanism more stringent; therefore, Executive Officer approval is appropriate.

¹⁴⁴ Stormwater treatment measures that detain runoff are generally those that filter runoff through soil or other media, and include bioretention units, bioswales, basins, planter boxes, tree wells, media, filters, and green roofs.

- d. *Financial contribution to an alternative HM project:* The difference between 2 percent of the project construction costs and the cost of the treatment measures at the site (both costs as described in Section 2.a of this Attachment) shall be contributed to an alternative HM project, such as a stormwater treatment retrofit, HM retrofit, regional HM control, or in-stream measure. Preference shall be given to projects discharging, in this order, to the same tributary, mainstem, watershed, then in the same municipality or county.

3. Record Keeping

Permittees shall collect and retain the following information for all projects subject to HM requirements:

- a. Site plans identifying impervious areas, surface flow directions for the entire site, and location(s) of HM measures;
- b. For projects using standard sizing charts, a summary of sizing calculations used;
- c. For projects using the BAHM, a listing of model inputs;
- d. For projects using custom modeling, a summary of the modeling calculations with corresponding graph showing curve matching (existing, post-project, and post-project with HM controls curves);
- e. For projects using the Impracticability Provision, a listing of all applicable costs and a brief description of the alternative HM project (name, location, date of start up, entity responsible for maintenance); and
- f. A listing, summary, and date of modifications made to the BAHM, including technical rationale. Permittees shall submit this list and explanation annually with the Annual Report.

4. HM Control Areas

Applicable projects shall be required to meet the HM Standard when such projects discharge into the upstream reaches of Laurel or LedgeWood Creeks, as delineated in the Fairfield-Suisun Permittees' HM Maps (available at http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/muni/mrp/Final%20TO%20HM%20Maps.pdf). Plans to restore a creek reach may reintroduce the applicability of HM requirements; in these instances, Permittees may add, but shall not delete, areas of applicability accordingly.

ATTACHMENT E

Provision C.3.g. San Mateo Permittees Hydromodification Management Requirements

San Mateo Permittees Hydromodification Management Requirements

1. On-site and Regional Hydromodification Management (HM) Control Design Criteria

- a. *Range of flows to control:* Flow duration controls shall be designed such that post-project stormwater discharge rates and durations match pre-project discharge rates and durations from 10 percent of the pre-project 2-year peak flow¹⁴⁵ up to the pre-project 10-year peak flow.
- b. *Goodness of fit criteria:* The post-project flow duration curve shall not deviate above the pre-project flow duration curve by more than 10 percent over more than 10 percent of the length of the curve corresponding to the range of flows to control.
- c. *Allowable low flow rate:* Flow control structures may be designed to discharge stormwater at a very low rate that does not threaten to erode the receiving waterbody. This flow rate (also called Q_{cp} ¹⁴⁶) shall be no greater than 10 percent of the pre-project 2-year peak flow.
- d. *Standard HM modeling:* On-site and regional HM controls designed using the Bay Area Hydrology Model (BAHM¹⁴⁷) and site-specific input data shall be considered to meet the HM Standard. Such use must be consistent with directions and options set forth in the

¹⁴⁵ Where referred to in this Order, the 2-year peak flow is determined using a flood flow frequency analysis procedure based on USGS Bulletin 17 B to obtain the peak flow statistically expected to occur at a 2-year recurrence interval. In this analysis, the appropriate record of hourly rainfall data (e.g., 35–50 years of data) is run through a continuous simulation hydrologic model, the annual peak flows are identified, rank ordered, and the 2-year peak flow is estimated. Such models include USEPA's Hydrologic Simulation Program—Fortran (HSPF), U.S. Army Corps of Engineers' Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS), and USEPA's Storm Water Management Model (SWMM).

¹⁴⁶ Q_{cp} is the allowable low flow discharge from a flow control structure on a project site. It is a means of apportioning the critical flow in a stream to individual projects that discharge to that stream, such that cumulative discharges do not exceed the critical flow in the stream.

¹⁴⁷ See www.bayareahydrologymodel.org, Resources

most current BAHM User Manual.¹⁴⁸ Permittees shall demonstrate to the satisfaction of the Executive Officer that any modifications of the BAHM made are consistent with the requirements of Provision C.3.g.

- e. *Alternate HM modeling and design:* The project proponent may use a continuous simulation hydrologic computer model¹⁴⁹ to simulate pre-project and post-project runoff and to design HM controls. To use this method, the project proponent shall compare the pre-project and post-project model output for a rainfall record of at least 30 years, and shall show that all applicable performance criteria in 1.a.–c. above are met.

2. Impracticability Provision

Where conditions (e.g., extreme space limitations) prevent a project from meeting the HM Standard for a reasonable cost, *and* where the project's runoff cannot be directed to a regional HM control within a reasonable time frame, *and* where an in-stream measure is not practicable, the project shall use (1) site design for hydrologic source control, *and* (2) stormwater treatment measures that collectively minimize, slow, and detain¹⁵⁰ runoff to the maximum extent practicable. In addition, , if the cost of providing site design for hydrologic source control and treatment measures to the maximum extent practicable does not exceed 2% of the project cost (as defined in "2.a." below), the project proponent shall provide for or contribute financially to an alternative HM project as set forth below:

- a. *Reasonable cost:* To show that the HM Standard cannot be met at a reasonable cost, the project proponent must demonstrate that the total cost to comply with both the HM Standard and the Provision C.3.d treatment requirement exceeds 2 percent of the project construction cost, excluding land costs. Costs of HM and treatment control measures shall not include land costs, soil disposal fees, hauling, contaminated soil testing, mitigation, disposal, or other normal site enhancement costs such as landscaping or grading that are required for other development purposes.
- b. *Regional HM controls:* A regional HM control shall be considered available if there is a planned location for the regional HM control and if an appropriate funding mechanism for a regional HM control is in place by the time of project construction.
- c. *In-stream measures practicability:* In-stream measures shall be considered practicable when an in-stream measure for the project's watershed is planned and an appropriate funding mechanism for an in-stream measure is in place by the time of project construction.
- d. *Financial contribution to an alternative HM project:* The difference between 2 percent of the project construction costs and the cost of the treatment measures at the site (both costs as described in Section 2.a of this Attachment shall be contributed to an alternative HM project, such as a stormwater treatment retrofit, HM retrofit, regional HM control, or

¹⁴⁸ The Bay Area Hydrology Model User Manual is available at <http://www.bayareahydrologymodel.org/downloads.html>

¹⁴⁹ Such models include USEPA's Hydrologic Simulation Program—Fortran (HSPF), U.S. Army Corps of Engineers Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS), and USEPA's Storm Water Management Model (SWMM).

¹⁵⁰ Stormwater treatment measures that detain runoff are generally those that filter runoff through soil or other media, and include bioretention units, bioswales, basins, planter boxes, tree wells, media filters, and green roofs.

in-stream measure. Preference shall be given to projects discharging, in this order, to the same tributary, mainstem, watershed, then in the same municipality, or county.

3. Record Keeping

Permittees shall collect and retain the following information for all projects subject to HM requirements:

- a. Site plans identifying impervious areas, surface flow directions for the entire site, and location(s) of HM measures;
- b. For projects using standard sizing charts, a summary of sizing calculations used;
- c. For projects using the BAHM, a listing of model inputs;
- d. For projects using custom modeling, a summary of the modeling calculations with corresponding graph showing curve matching (existing, post-project, and post-project with HM controls curves);
- e. For projects using the Impracticability Provision, a listing of all applicable costs and a brief description of the alternative HM project (name, location, date of startup, entity responsible for maintenance); and
- f. A listing, summary, and date of modifications made to the BAHM, including technical rationale. Permittees shall submit this list and explanation annually with the Annual Report. This may be prepared at the Countywide Program level and submitted on behalf of participating Permittees.

4. HM Control Areas

Applicable projects shall be required to meet the HM Standard when such projects are in the HM control areas shown in the San Mateo Permittees' HM Map (available at http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/muni/mrp/Final%20TO%20HM%20Maps.pdf). Plans to restore a creek reach may reintroduce the applicability of HM requirements; in these instances, Permittees may add, but shall not delete, areas of applicability accordingly.

The HM Standard and all associated requirements apply in areas that are shown in green on the map and noted in the map's key as *areas subject to HMP*. The other areas are exempt from the HM Standard because they drain to hardened channels or low gradient channels (a characteristic applicable to San Mateo County's particular shoreline properties), or are in highly developed areas. Plans to restore a hardened channel may affect areas of applicability.

Areas shown in the San Mateo Permittees' HM Map may be modified as follows:

- b. **Street Boundary Interpretation** – Streets are used to mark the boundary between areas where the HM Standard must be met and exempt areas. Parcels on the boundary street are considered within the area exempted from the hydromodification requirements. Nonetheless, there might be cases where the drainage from a particular parcel(s) on the boundary street drains westward into the hydromodification required area and, as such, any applicable project on such a parcel(s) would be subject to the hydromodification requirements.

- c. Hardened Channel/Drainage to Exempt Area** – If drainage leaving a proposed project subject to the HM Standard is determined to flow only through a hardened channel and/or enclosed pipe along its entire length before directly discharging into a waterway in the exempt area or into tidal waters, the project would be exempted from the HM Standard and its associated requirements. The project proponent must demonstrate, in a statement signed by an engineer or qualified environmental professional, that this condition is met.
- d. Boundary Re-Opener** – If the municipal regional permit or future permit reissuances or amendments modify the types of projects subject to the hydromodification requirements, the appropriate location for an HMP boundary or boundaries will be reevaluated at the same time.

ATTACHMENT F

Provision C.3.g. Santa Clara Permittees Hydromodification Management Requirements

Santa Clara Permittees Hydromodification Management Requirements

1. On-site and Regional Hydromodification Management (HM) Control Design Criteria

- a. *Range of flows to control:* Flow duration controls shall be designed such that post-project stormwater discharge rates and durations match pre-project discharge rates and durations from 10 percent of the pre-project 2-year peak flow¹⁵¹ up to the pre-project 10-year peak flow, except where the lower endpoint of this range is modified as described in Section 5 of this Attachment.
- b. *Goodness of fit criteria:* The post-project flow duration curve shall not deviate above the pre-project flow duration curve by more than 10 percent over more than 10 percent of the length of the curve corresponding to the range of flows to control.
- c. *Allowable low flow rate:* Flow control structures may be designed to discharge stormwater at a very low rate that does not threaten to erode the receiving waterbody. This flow rate (also called Q_{cp} ¹⁵²) shall be no greater than 10 percent of the pre-project 2-year peak flow unless a modified value is substantiated by analysis of actual channel resistance in accordance with an approved User Guide as described in Section 5 of this Attachment.
- d. *Standard HM modeling:* On-site and regional HM controls designed using the Bay Area Hydrology Model (BAHM¹⁵³) and site-specific input data shall be considered to meet the HM Standard. Such use must be consistent with directions and options set forth in the

¹⁵¹ Where referred to in this Order, the 2-year peak flow is determined using a flood flow frequency analysis procedure based on USGS Bulletin 17B to obtain the peak flow statistically expected to occur at a 2-year recurrence interval. In this analysis, the appropriate record of hourly rainfall data (e.g., 35–50 years of data) is run through a continuous simulation hydrologic model, the annual peak flows are identified, rank ordered, and the 2-year peak flow is estimated. Such models include USEPA’s Hydrologic Simulation Program—Fortran (HSPF), U.S. Army Corps of Engineers’ Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS), and USEPA’s Storm Water Management Model (SWMM).

¹⁵² Q_{cp} is the allowable low flow discharge from a flow control structure on a project site. It is a means of apportioning the critical flow in a stream to individual projects that discharge to that stream, such that cumulative discharges do not exceed the critical flow in the stream.

¹⁵³ See www.bayareahydrologymodel.org, Resources.

most current BAHM User Manual.¹⁵⁴ Permittees shall demonstrate to the satisfaction of the Executive Officer that any modifications of the BAHM made are consistent with this attachment and Provision C.3.g.

- e. *Alternate HM modeling and design:* The project proponent may use a continuous simulation hydrologic computer model¹⁵⁵ to simulate pre-project and post-project runoff and to design HM controls. To use this method, the project proponent shall compare the pre-project and post-project model output for a rainfall record of at least 30 years, and shall show that all applicable performance criteria in 1.a. – c. above are met.

2. Impracticability Provision

Where conditions (e.g., extreme space limitations) prevent a project from meeting the HM Standard for a reasonable cost, *and* where the project's runoff cannot be directed to a Regional HM control¹⁵⁶ within a reasonable time frame, *and* where an in-stream measure is not practicable, the project shall use (1) site design for hydrologic source control, *and* (2) stormwater treatment measures that collectively minimize, slow, and detain¹⁵⁷ runoff to the maximum extent practicable. In addition, if the cost of providing site design for hydrologic source control and treatment measures to the maximum extent practicable does not exceed 2% of the project cost (as defined in "2.a." below), the project shall contribute financially to an alternative HM project as set forth below:

- a. *Reasonable cost:* To show that the HM Standard cannot be met at a reasonable cost, the project proponent must demonstrate that the total cost to comply with both the HM Standard and the Provision C.3.d treatment requirement exceeds 2 percent of the project construction cost, excluding land costs. Costs of HM and treatment control measures shall not include land costs, soil disposal fees, hauling, contaminated soil testing, mitigation, disposal, or other normal site enhancement costs such as landscaping or grading that are required for other development purposes.
- b. *Regional HM control:* A regional HM control shall be considered available if there is a planned location for the regional HM control and if an appropriate funding mechanism for a regional control is in place by the time of project construction.
- c. *In-stream measures practicability:* In-stream measures shall be considered practicable when an in-stream measure for the project's watershed is planned and an appropriate funding mechanism for an in-stream measure is in place by the time of project construction.
- d. *Financial contribution to an alternative HM project:* The difference between 2 percent of the project construction costs and the cost of the treatment measures at the site (both costs as described in Section 2.a of this Attachment) shall be contributed to an alternative

¹⁵⁴ *The Bay Area Hydrology Model User Manual* is available at <http://www.bayareahydrologymodel.org/downloads.html>.

¹⁵⁵ Such models include USEPA's Hydrologic Simulation Program—Fortran (HSPF), U.S. Army Corps of Engineers Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS), and USEPA's Storm Water Management Model (SWMM).

¹⁵⁶ *Regional HM controls* are flow duration control structures that collect stormwater runoff discharge from multiple projects (each of which should incorporate hydrologic source control measures as well) and are designed such that the HM Standard is met for all the projects at the point where the regional control measure discharges.

¹⁵⁷ Stormwater treatment measures that detain runoff are generally those that filter runoff through soil or other media, and include bioretention units, bioswales, basins, planter boxes, sand filters, and green roofs.

HM project, such as a stormwater treatment retrofit, HM retrofit, regional HM control, or in-stream measure. Preference shall be given to projects discharging, in this order, to the same tributary, mainstem, watershed, then in the same municipality or county.

3. Record Keeping

Permittees shall collect and retain the following information for all projects subject to HM requirements:

- a. Site plans identifying impervious areas, surface flow directions for the entire site, and location(s) of HM measures;
- b. For projects using standard sizing charts, a summary of sizing calculations used;
- c. For projects using the BAHM, a listing of model inputs;
- d. For projects using custom modeling, a summary of the modeling calculations with corresponding graph showing curve matching (existing, post-project, and post-project with HM controls curves);
- e. For projects using the Impracticability Provision, a listing of all applicable costs and a brief description of the alternative HM project (name, location, date of start up, entity responsible for maintenance); and
- f. A listing, summary, and date of modifications made to the BAHM, including technical rationale. Permittees shall submit this list and explanation annually with the Annual Report. This may be prepared at the Countywide Program level and submitted on behalf of participating Permittees.

4. HM Control Areas

Applicable projects shall be required to meet the HM Standard when such projects are located in areas of HM applicability as described below and shown in the revised Santa Clara Permittees' HM Map (see Attachment M).

- a. **Purple areas:** These areas represent catchments that drain to hardened channels that extend continuously to the Bay or to tidally influenced sections of creeks. The HM Standard and associated requirements do not apply to projects in the areas designated in purple on the map.

Plans to restore a creek reach may reintroduce the applicability of HM requirements, unless the creek restoration project is designed to accommodate the potential hydromodification impacts of future development; if this is not the case, in these instances, Permittees may add, but shall not delete, areas of applicability accordingly.

- b. **Red areas:** These areas represent catchments and subwatersheds that are greater than or equal to 65% impervious, based on existing imperviousness data sources. The HM Standard and associated requirements do not apply to projects in the areas designated in red on the map.
- c. **Green area:** These areas represent catchments and subwatersheds that are less than 65% impervious. The HM Standard and associated requirements apply to projects in areas designated as green on the map.

5. Potential Exceptions to Map Designations

The Program may choose to prepare a User Guide¹⁵⁸ to be used for evaluating individual receiving waterbodies using detailed methods to assess channel stability and watercourse critical flow. This User Guide would reiterate and collate established stream stability assessment methods that have been presented in the Program's HMP.¹⁵⁹ After the Program has collated its methods into User Guide format, received approval of the User Guide from the Executive Officer,¹⁶⁰ and informed the public through such process as an electronic mailing list, the Permittees may use the User Guide to guide preparation of technical reports for the following: implementing the HM Standard using in-stream or regional controls; determining whether certain projects are discharging to a watercourse that is less susceptible (from point of discharge to the Bay) to hydromodification (e.g., would have a lower potential for erosion than set forth in these requirements); and/or determining if a watercourse has a higher critical flow and project(s) discharging to it are eligible for an alternative Qcp for the purpose of designing on-site or regional measures to control flows draining to these channels (i.e., the actual threshold of erosion-causing critical flow is higher than 10 percent of the 2-year pre-project flow). In no case shall the design value of Qcp exceed 50 percent of the 2-year pre-project flow.

¹⁵⁸ The User Guide may be offered under a different title.

¹⁵⁹ The Program's HMP has undergone Water Board staff review and been subject to public notice and comment.

¹⁶⁰ The User Guide will not introduce a new concept, but rather reformat existing methods; therefore, Executive Officer approval is appropriate.

ATTACHMENT G

Provision C.3.h. Sample Reporting Table

**Table C.3.h. – Operation and Maintenance of Stormwater Treatment Systems
City of Eden Annual Report FY 2008-09**

Facility/Site Inspected and Responsible Party for Maintenance	Date of Inspection	Type of Inspection (annual, follow-up, etc.)	Type of Treatment System or HM Control Inspected	Inspection Findings or Results	Enforcement Action Taken (Warning, NOV, administrative citation, etc.)	Comments
ABC Company 123 Alphabet Road San Jose	12/06/08	annual	offsite bioretention unit	proper operation	none	Unit is operating properly and is well maintained.
DEF site 234 Blossom Drive Santa Clara	12/17/08	annual	onsite media filter	ineffective filter media	verbal warning	Media filter is clogged and needs to be replaced.
	12/19/08	follow-up	onsite media filter	proper operation	none	New media filter in place and unit is operating properly.
	1/19/09	follow-up	onsite media filter	proper operation	none	Unit is operating properly.
GHI Hotel 1001 Grand Blvd 227 Touring Parkway	12/21/08	annual	onsite swales	proper operation	notice of violation	Bioretention unit #2 is badly eroded because of flow channelization. Stormwater is flowing over the eroded areas, bypassing treatment and running off into parking area.
			onsite bioretention unit #1	proper operation		
			onsite bioretention unit #2	eroded areas due to flow channelization		
	12/27/08	follow-up	onsite bioretention unit #2	proper operation	none	Entire bioretention unit #2 has been replanted and re-graded. Raining heavily but no overflow observed.
Rolling Hills Estates Homeowners' Association 543 Rolling Hill Drive Pleasanton	01/17/09	annual	onsite pond	sediment and debris accumulation	notice of violation	Pond needs sediment removal and check dam needs debris removal.
	01/24/09	follow-up	onsite pond	sediment and debris accumulation	administrative citation \$1000	Pond still a mess. Administrative citation requires maintenance within a week.
	01/31/09	follow-up	onsite pond	proper maintenance	none	Pond maintenance completed.
	02/18/09	spot inspection	onsite pond	proper operation and maintenance	none	Proper operation and maintenance.

ATTACHMENT H

Provision C.8. Status and Long-Term Monitoring Follow-up Analysis and Actions

Status and Long-Term Monitoring Follow-up Analysis and Actions for Biological Assessment, Bedded Sediment Toxicity, and Bedded Sediment Pollutants

When results from Biological Assessment, Bedded Sediment Toxicity, and/or Bedded Sediment Pollutants monitoring indicate impacts at a monitoring location, Permittees shall evaluate the extent and cause(s) of impacts to determine the potential role of urban runoff as indicated in Table H-1.

Table H-1. Sediment Triad Approach to Determining Follow-Up Actions

Chemistry Results ¹⁶¹	Toxicity Results ¹⁶²	Bioassessment Results ¹⁶³	Action
No chemicals exceed Threshold Effect Concentrations (TEC), mean Probable Effects Concentrations (PEC) quotient < 0.5 and pyrethroids < 1.0 Toxicity Unit (TU) ¹⁶⁴	No Toxicity	No indications of alterations	No action necessary
No chemicals exceed TECs, mean PEC quotient < 0.5 and pyrethroids < 1.0 TU	Toxicity	No indications of alterations	(1) Take confirmatory sample for toxicity. (2) If toxicity repeated, attempt to identify cause and spatial extent. (3) Where impacts are under Permittee's control, take management actions to minimize upstream sources causing toxicity; initiate no later than the second fiscal year following the sampling event.

¹⁶¹ TEC and PEC are found in MacDonald, D.D., G.G. Ingersoll, and T.A. Berger. 2000. Development and Evaluation of Consensus-based Sediment Quality Guidelines for Freshwater Ecosystems. *Archives of Environ. Contamination and Toxicology* 39(1):20–31.

¹⁶² Toxicity is exhibited when *Hyallela* survival statistically different than and < 20 percent of control.

¹⁶³ Alterations are exhibited if metrics indicate substantially degraded community.

¹⁶⁴ Toxicity Units (TU) are calculated as follows: TU = Actual concentration (organic carbon normalized) ÷ Reported *H. azteca* LC₅₀ concentration (organic concentration normalized). Weston, D.P., R.W. Holmes, J. You, and M.J. Lydy, 2005. Aquatic Toxicity Due to Residential Use of Pyrethroid Insecticides. *Environ. Science and Technology* 39(24):9778–9784.

Chemistry Results ¹⁶¹	Toxicity Results ¹⁶²	Bioassessment Results ¹⁶³	Action
No chemicals exceed TECs, mean PEC quotient < 0.5 and pyrethroids < 1.0 TU	No Toxicity	Indications of alterations	Identify the most probable cause(s) of the alterations in biological community. Where impacts are under Permittee's control, take management actions to minimize the impacts causing physical habitat disturbance; initiate no later than the second fiscal year following the sampling event.
No chemicals exceed TECs, mean PEC quotient < 0.5 and pyrethroids < 1.0 TU	Toxicity	Indications of alterations	(1) Identify cause(s) of impacts and spatial extent. (2) Where impacts are under Permittee's control, take management actions to minimize impacts; initiate no later than the second fiscal year following the sampling event.
3 or more chemicals exceed PECs, the mean PEC quotient is > 0.5, or pyrethroids > 1.0 TU	No Toxicity	Indications of alterations	(1) Identify cause of impacts. (2) Where impacts are under Permittee's control, take management actions to minimize the impacts caused by urban runoff; initiate no later than the second fiscal year following the sampling event.
3 or more chemicals exceed PECs, the mean PEC quotient is > 0.5, or pyrethroids > 1.0 TU	Toxicity	No indications of alterations	(1) Take confirmatory sample for toxicity. (2) If toxicity repeated, attempt to identify cause and spatial extent. (3) Where impacts are under Permittee's control, take management actions to minimize upstream sources; initiate no later than the second fiscal year following the sampling event.
3 or more chemicals exceed PECs, the mean PEC quotient is > 0.5, or pyrethroids > 1.0 TU	No Toxicity	No Indications of alterations	If PEC exceedance is Hg or PCBs, address under TMDLs
3 or more chemicals exceed PECs, the mean PEC quotient is > 0.5, or pyrethroids > 1.0 TU	Toxicity	Indications of alterations	(1) Identify cause(s) of impacts and spatial extent. (2) Where impacts are under Permittee's control, take management actions to address impacts.

ATTACHMENT I

Provision C.8. Standard Monitoring Provisions

All monitoring activities shall meet the following requirements:

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. [40 CFR 122.41(j)(1)]
2. Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, and copies of all reports required by this Order for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Water Board or USEPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge. [40 CFR 122.41(j)(2), CWC section 13383(a)]
3. Records of monitoring information shall include [40 CFR 122.41(j)(3)]:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and,
 - f. The results of such analyses.
4. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both. [40 CFR 122.41(j)(5)]
5. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the monitoring Provisions. [40 CFR 122.41(l)(4)(iii)]
6. All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.
7. For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Permittees shall instruct its laboratories to establish calibration standards that are equivalent to or lower than the Minimum Levels (MLs) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). If a Permittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Permittee must submit documentation from the laboratory to the Water Board for approval prior to raising the ML for any priority toxic pollutant.
8. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-

compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both. [40 CFR 122.41(k)(2)]

9. If the discharger monitors any pollutant more frequently than required by the Permit, unless otherwise specified in the Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the reports requested by the Water Board. [40 CFR 122.41(l)(4)(ii)]

ATTACHMENT J

Minimum Trash Capture Area and Minimum Number of Trash Hot Spots

Table 10.1 Minimum Trash Capture Area and Trash Hot Spots for Population Based Permittees

Data Source: <http://quake.abag.ca.gov/mitigation/pickdbh2.html> and Association of Bay Area Governments, 2005 ABAG Land Use Existing Land Use in 2005: Report and Data for Bay Area Counties

	Population	Retail / Wholesale Commercial Acres	Minimum Trash Capture Catchment Area (Acres) ¹⁶⁵	# of Trash Hot Spots per 30K Population	# of Trash Hot Spots per 100 Retail / Wholesale Commercial Acres	Minimum # of Trash Hot Spots ¹⁶⁶
Alameda County						
San Leandro	73,402	721	216	2	7	4
Oakland	420,183	759	228	14	8	8
Dublin	46,934	377	113	1	3	3
Emeryville	9,727	69	21	1	1	1
Albany	16,877	95	28	1	1	1
Berkeley	106,697	183	55	3	1	3
Alameda County Unincorporated.	140,825	375	112	4	3	4
Alameda	75,823	402	121	2	4	4
Fremont	213,512	698	209	7	6	7
Hayward	149,205	726	218	4	7	7
Livermore	83,604	423	127	2	4	4
Newark	43,872	314	94	1	3	3
Piedmont	11,100	1	0.3	1	1	1
Pleasanton	69,388	366	110	2	3	3
Union City	73,402	183	55	2	1	2

¹⁶⁵ 30% of Retail / Wholesale Commercial Acres

¹⁶⁶ If the hot spot # based on % commercial area is more than twice that based on population, the minimum hot spot # is double the population based #.

	Population	Retail / Wholesale Commercial Acres	Minimum Trash Capture Catchment Area (Acres) ¹⁶⁵	# of Trash Hot Spots per 30K Population	# of Trash Hot Spots per 100 Retail / Wholesale Commercial Acres	Minimum # of Trash Hot Spots ¹⁶⁶
San Mateo County						
San Mateo County Unincorporated.	65,844	71	21	2	1	2
Atherton	7,475	0	0	1	1	1
Belmont	26,078	58	17	1	1	1
Brisbane	3,861	16	5	1	1	1
Burlingame	28,867	123	37	1	1	1
Colma	1,613	106	32	1	1	1
Portola Valley	4,639	9	3	1	1	1
Daly City	106,361	242	73	3	2	3
East Palo Alto	32,897	59	18	1	1	1
Foster City	30,308	67	20	1	1	1
Half Moon Bay	13,046	49	15	1	1	1
Hillsborough	11,272	0	0	1	1	1
Menlo Park	31,490	83	25	1	1	1
Millbrae	21,387	68	20	1	1	1
Pacifica	39,616	100	30	1	1	1
Redwood City	77,269	309	93	2	3	3
San Bruno	43,444	137	41	1	1	1
San Carlos	28,857	129	39	1	1	1
San Mateo	95,776	275	82	3	2	3
South San Francisco	63,744	195	58	2	1	2
Woodside	5,625	9	3	1	1	1

	Population	Retail / Wholesale Commercial Acres	Minimum Trash Capture Catchment Area (Acres) ¹⁶⁵	# of Trash Hot Spots per 30K Population	# of Trash Hot Spots per 100 Retail / Wholesale Commercial Acres	Minimum # of Trash Hot Spots ¹⁶⁶
Contra Costa County						
Contra Costa County Unincorporated.	173,573	524	157	5	5	5
Concord	123,776	1016	305	4	10	8
Walnut Creek	65,306	329	99	2	3	3
Clayton	10,784	21	6	1	1	1
Danville	42,629	134	40	1	1	1
El Cerrito	23,320	105	32	1	1	1
Hercules	24,324	37	11	1	1	1
Lafayette	23,962	68	20	1	1	1
Martinez	36,144	142	43	1	1	1
Moraga	16,138	108	32	1	1	1
Orinda	17,542	24	7	1	1	1
Pinole	19,193	140	42	1	1	1
Pittsburg	63,652	520	156	2	5	4
Pleasant Hill	33,377	219	66	1	2	2
Richmond	103,577	391	117	3	3	3
San Pablo	31,190	131	39	1	1	1
San Ramon	59,002	274	82	1	2	2

	Population	Retail / Wholesale Commercial Acres	Minimum Trash Capture Catchment Area (Acres) ¹⁶⁵	# of Trash Hot Spots per 30K Population	# of Trash Hot Spots per 100 Retail / Wholesale Commercial Acres	Minimum # of Trash Hot Spots ¹⁶⁶
Santa Clara County						
Santa Clara County Unincorporated	99,122	270	81	3	3	3
Cupertino	55,551	213	64	2	2	2
Los Altos	28,291	65	20	1	1	1
Los Altos Hills	8,837	0	0	1	1	1
Los Gatos	30,296	163	49	1	1	1
Milpitas	69,419	457	137	2	4	4
Monte Sereno	3,579	0	0	1	1	1
Mountain View	73,932	375	112	2	3	3
Santa Clara	115,503	560	168	3	5	5
Saratoga	31,592	41	12	1	1	1
San Jose	989,496	2983	895	32	29	32
Sunnyvale	137,538	548	164	3	5	5
Palo Alto	63,367	282	84	2	2	2
Solano County						
Vallejo	120,416	559	168	4	5	5
Fairfield	106,142	486	146	3	4	4
Suisun	28,031	75	22	1	1	1
Totals	4,930,339	19057	5718	165	184	349

**Table 10-2. Non-Population Based Permittee Trash Hot Spot
 and Trash Capture Assignments**

Non population based Permittee	Number of Trash Hot Spots	Trash Capture Requirement
Santa Clara Valley Water District	12	4 trash booms or 8 outfall capture devices (minimum 2 ft. diameter outfall) or equivalent measures
Alameda County Flood Control Agency	9	3 trash booms or 6 outfall capture devices (minimum 2 ft. diameter outfall) or equivalent measures
Alameda Co. Zone 7 Flood Control Agency	3	1 trash boom or 2 outfall capture devices (minimum 2 ft. diameter outfall) or equivalent measures
Contra Costa County Flood Control Agency	6	2 trash booms or 4 outfall capture devices (minimum 2 ft. diameter outfall) or equivalent measures
San Mateo County Flood Control District	2	1 trash booms or 2 outfall capture devices (minimum 2 ft. diameter outfall) or equivalent measures
Vallejo Sanitation and Flood District	1	1 trash boom or 2 outfall capture devices or equivalent measures (minimum 2 ft. diameter outfall)

ATTACHMENT K

Standard NPDES Stormwater Permit Provisions

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

**Standard Provisions and Reporting Requirements
for
NPDES Stormwater Discharge Permits**

February 2009

A. GENERAL PROVISIONS

1. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.
2. All discharges authorized by this Order shall be consistent with the terms and conditions of this Order.
3. **Duty to Comply**
 - a. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act, or amendments thereto, for a toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in a Board adopted Order, discharger must comply with the new standard or prohibition. The Board will revise or modify the Order in accordance with such toxic effluent standard or prohibition and so notify the discharger.
 - b. If more stringent applicable water quality standards are approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the discharger must comply with the new standard. The Board will revise and modify this Order in accordance with such more stringent standards.
 - c. The filing of a request by the discharger for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 CFR 122.41(f)]

4. Duty to Mitigate

The discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this order and permit which has a reasonable likelihood of adversely affecting public health or the environment, including such accelerated or additional monitoring as requested by the Board or Executive Officer to determine the nature and impact of the violation. [40 CFR 122.41(d)]

5. Pursuant to U.S. Environmental Protection Agency regulations the discharger must notify the Water Board as soon as it knows or has reason to believe (1) that they have begun or expect to begin, use or manufacture of a pollutant not reported in the permit application,

or (2) a discharge of toxic pollutants not limited by this permit has occurred, or will occur, in concentrations that exceed the limits specified in 40 CFR 122.42(a).

6. The discharge of any radiological, chemical, or biological warfare agent waste is prohibited.
7. All facilities used for transport, treatment, or disposal of wastes shall be adequately protected against overflow or washout as the result of a 100-year frequency flood.
8. Collection, treatment, storage and disposal systems shall be operated in a manner that precludes public contact with wastewater, except where excluding the public is inappropriate, warning signs shall be posted.
9. **Property Rights**

This Order and Permit does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from liabilities under federal, state or local laws, nor create a vested right for the discharge to continue the waste discharge or guarantee the discharger a capacity right in the receiving water. [40 CFR 122.41(g)]

10. Inspection and Entry

The Board or its authorized representatives shall be allowed:

- a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of the order and permit;
- b. Access to and copy at, reasonable times, any records that must be kept under the conditions of the order and permit;
- c. To inspect at reasonable times any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under the order and permit; and
- d. To photograph, sample, and monitor, at reasonable times for the purpose of assuring compliance with the order and permit or as otherwise authorized by the Clean Water Act, any substances or parameters at any locations. [40 CFR 122.41(i)]

11. Permit Actions

This Order and Permit may be modified, revoked and reissued, or terminated in accordance with applicable State and/or Federal regulations. Cause for taking such action includes, but is not limited to any of the following:

- a. Violation of any term or condition contained in the Order and Permit;
- b. Obtaining the Order and Permit by misrepresentation, or by failure to disclose fully all relevant facts;
- c. Endangerment to public health or environment that can only be regulated to acceptable levels by order and permit modification or termination; and
- d. Any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

12. Duty to Provide Information

The discharger shall furnish, within a reasonable time, any information the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit. The discharger shall also furnish to the Board, upon request, copies of records required to be kept by its permit. [40 CFR 122.41(h)]

13. Availability

A copy of this permit shall be maintained at the discharge facility and be available at all times to operating personnel.

14. Continuation of Expired Permit

This permit continues in force and effect until a new permit is issued or the Board rescinds the permit. Only those dischargers authorized to discharge under the expiring permit are covered by the continued permit.

B. GENERAL REPORTING REQUIREMENTS

1. Signatory Requirements

a. All reports required by the order and permit and other information requested by the Board or USEPA Region 9 shall be signed by a principal executive officer or ranking elected official of the discharger, or by a duly authorized representative of that person. [40 CFR 122.22(b)]

b. Certification

All reports signed by a duly authorized representative under Provision E.1.a. shall contain the following certification:

"I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. [40 CFR 122.22(d)]

2. Should the discharger discover that it failed to submit any relevant facts or that it submitted incorrect information in any report, it shall promptly submit the missing or correct information. [40 CFR 122.41(l)(8)]

3. False Reporting

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall be subject to enforcement procedures as identified in Section F of these Provisions.

4. Transfers

- a. This permit is not transferable to any person except after notice to the Board. The Board may require modification or revocation and reissuance of the permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.
- b. Transfer of control or ownership of a waste discharge facility under an National Pollutant Discharge Elimination System permit must be preceded by a notice to the Board at least 30 days in advance of the proposed transfer date. The notice must include a written agreement between the existing discharger and proposed discharger containing specific dates for transfer of responsibility, coverage, and liability between them. Whether an order and permit may be transferred without modification or revocation and reissuance is at the discretion of the Board. If order and permit modification or revocation and reissuance is necessary, transfer may be delayed 180 days after the Board's receipt of a complete application for waste discharge requirements and an NPDES permit.

5. Compliance Reporting

a. Planned Changes

The discharger shall file with the Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.

b. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final compliance dates contained in any compliance schedule shall be submitted within 10 working days following each scheduled date unless otherwise specified within this order and permit. If reporting noncompliance, the report shall include a description of the reason for failure to comply, a description and schedule of tasks necessary to achieve compliance and an estimated date for achieving full compliance. A final report shall be submitted within 10 working days of achieving full compliance, documenting full compliance

c. Non-compliance Reporting (Twenty-four hour reporting:)

- i. The discharger shall report any noncompliance that may endanger health or the environment. All pertinent information shall be provided orally within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five working days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

C. ENFORCEMENT

1. The provision contained in this enforcement section shall not act as a limitation on the statutory or regulatory authority of the Board.

2. Any violation of the permit constitutes violation of the California Water Code and regulations adopted hereunder and the provisions of the Clean Water Act, and is the basis for enforcement action, permit termination, permit revocation and reissuance, denial of an application for permit reissuance; or a combination thereof.
3. The Board may impose administrative civil liability, may refer a discharger to the State Attorney General to seek civil monetary penalties, may seek injunctive relief or take other appropriate enforcement action as provided in the California Water Code or federal law for violation of Board orders.
4. It shall not be a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this order and permit.
5. A discharger seeking to establish the occurrence of any upset (See Definitions, G. 24) has the burden of proof. A discharger who wishes to establish the affirmative defense of any upset in an action brought for noncompliance shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:
 - a. an upset occurred and that the Permittee can identify the cause(s) or the upset;
 - b. the permitted facility was being properly operated at the time of the upset;
 - c. the discharger submitted notice of the upset as required in paragraph E.6.d.; and
 - d. the discharger complied with any remedial measures required under A.4.

No determination made before an action for noncompliance, such as during administrative review of claims that noncompliance was caused by an upset, is final administrative action subject to judicial review.

In any enforcement proceeding, the discharger seeking to establish the occurrence of any upset has the burden of proof. [40 CFR 122.41(n)]

D. DEFINITIONS

1. DDT and Derivatives shall mean the sum of the p,p' and o,p' isomers of DDT, DDD (TDE), and DDE.
2. Duly authorized representative is one whose:
 - a. Authorization is made in writing by a principal executive officer or ranking elected official;
 - b. Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as general manager in a partnership, manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
 - c. Written authorization is submitted to the USEPA Region 9. If an authorization becomes no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements above must be submitted to the Board and USEPA Region 9 prior to

or together with any reports, information, or applications to be signed by an authorized representative.

3. Hazardous substance means any substance designated under 40 CFR 116 pursuant to Section 311 of the Clean Water Act.
4. HCH shall mean the sum of the alpha, beta, gama (Lindane), and delta isomers of hexachlorocyclohexane.
5. Overflow is defined as the intentional or unintentional spilling or forcing out of untreated or partially treated wastes from a transport system (e.g. through manholes, at pump stations, and at collection points) upstream from the plant headworks or from any treatment plant facilities.
6. Priority pollutants are those constituents referred to in 40 CFR S122, Appendix D and listed in the USEPA NPDES Application Form 2C, (dated 6/80) Items V-3 through V-9.
7. Storm Water means storm water runoff, snow melt runoff, and surface runoff and drainage. It excludes infiltration and runoff from agricultural land.
8. Toxic pollutant means any pollutant listed as toxic under Section 307(a)(1) of the Clean Water Act or under 40 CFR S401.15.
9. Total Identifiable Chlorinated hydrocarbons (TICH) shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, PCBs and other identifiable chlorinated hydrocarbons.
10. Waste, waste discharge, discharge of waste, and discharge are used interchangeably in this order and permit. The requirements of this order and permit are applicable to the entire volume of water, and the material therein, which is disposed of to surface and ground waters of the State of California.

ATTACHMENT L

Provision C.3.c.i.(1)(b)(vi)

Specification of Soils for Biotreatment or Bioretention Facilities

Soils for biotreatment or bioretention areas shall meet two objectives:

- Be sufficiently permeable to infiltrate runoff at a minimum rate of 5" per hour during the life of the facility, and
- Have sufficient moisture retention to support healthy vegetation.

Achieving both objectives with an engineered soil mix requires careful specification of soil gradations and a substantial component of organic material (typically compost).

Local soil products suppliers have expressed interest in developing 'brand-name' mixes that meet these specifications. At their sole discretion, municipal construction inspectors may choose to accept test results and certification for a 'brand-name' mix from a soil supplier.

Tests must be conducted within 120 days prior to the delivery date of the bioretention soil to the project site.

Batch-specific test results and certification shall be required for projects installing more than 100 cubic yards of bioretention soil.

SOIL SPECIFICATIONS

Bioretention soils shall meet the following criteria. "Applicant" refers to the entity proposing the soil mixture for approval by a Permittee.

1. General Requirements – Bioretention soil shall:
 - a. Achieve a long-term, in-place infiltration rate of at least 5 inches per hour.
 - b. Support vigorous plant growth.
 - c. Consist of the following mixture of fine sand and compost, measured on a volume basis:
 - 60%-70% Sand
 - 30%-40% Compost
2. Submittal Requirements – The applicant shall submit to the Permittee for approval:
 - a. A sample of mixed bioretention soil.
 - b. Certification from the soil supplier or an accredited laboratory that the Bioretention Soil meets the requirements of this guideline specification.
 - c. Grain size analysis results of the fine sand component performed in accordance with ASTM D 422, Standard Test Method for Particle Size Analysis of Soils.
 - d. Quality analysis results for compost performed in accordance with Seal of Testing Assurance (STA) standards, as specified in 4.

- e. Organic content test results of mixed Bioretention Soil. Organic content test shall be performed in accordance with by Testing Methods for the Examination of Compost and Composting (TMECC) 05.07A, “Loss-On-Ignition Organic Matter Method”.
- f. Grain size analysis results of compost component performed in accordance with ASTM D 422, Standard Test Method for Particle Size Analysis of Soils.
- g. A description of the equipment and methods used to mix the sand and compost to produce Bioretention Soil.
- h. Provide the name of the testing laboratory(s) and the following information:
 - (1) Contact person(s)
 - (2) Address(s)
 - (3) Phone contact(s)
 - (4) E-mail address(s)
 - (5) Qualifications of laboratory(s), and personnel including date of current certification by STA, ASTM, or approved equal

3. Sand for Bioretention Soil

- a. Sand shall be free of wood, waste, coating such as clay, stone dust, carbonate, etc., or any other deleterious material. All aggregate passing the No. 200 sieve size shall be non-plastic.
- b. Sand for Bioretention Soils shall be analyzed by an accredited lab using #200, #100, #40, #30, #16, #8, #4, and 3/8 inch sieves (ASTM D 422 or as approved by municipality), and meet the following gradation:

Sieve Size	Percent Passing (by weight)	
	<i>Min</i>	<i>Max</i>
3/8 inch	100	100
No. 4	90	100
No. 8	70	100
No. 16	40	95
No. 30	15	70
No. 40	5	55
No. 100	0	15
No. 200	0	5

Note: all sands complying with ASTM C33 for fine aggregate comply with the above gradation requirements.

4. Composted Material

Compost shall be a well decomposed, stable, weed free organic matter source derived from waste materials including yard debris, wood wastes or other organic materials not including manure or biosolids meeting the standards developed by the US Composting Council (USCC). The product shall be certified through the USCC Seal of Testing Assurance (STA) Program (a compost testing and information disclosure program).

a. Compost Quality Analysis – Before delivery of the soil, the supplier shall submit a copy of lab analysis performed by a laboratory that is enrolled in the US Composting Council's Compost Analysis Proficiency (CAP) program and using approved Test Methods for the Evaluation of Composting and Compost (TMECC). The lab report shall verify:

- (1) Feedstock Materials shall be specified and include one or more of the following: landscape/yard trimmings, grass clippings, food scraps, and agricultural crop residues.
- (2) Organic Matter Content: 35% - 75% by dry wt.
- (3) Carbon and Nitrogen Ratio: C:N < 25:1 and C:N >15:1
- (4) Maturity/Stability: shall have a dark brown color and a soil-like odor. Compost exhibiting a sour or putrid smell, containing recognizable grass or leaves, or is hot (120F) upon delivery or rewetting is not acceptable. In addition any one of the following is required to indicate stability:
 - (i) Oxygen Test < 1.3 O₂ /unit TS /hr
 - (ii) Specific oxy. Test < 1.5 O₂ / unit BVS /
 - (iii) Respiration test < 8 C / unit VS / day
 - (iv) Dewar test < 20 Temp. rise (°C) e.
 - (v) Solvita® > 5 Index value
- (5) Toxicity: any one of the following measures is sufficient to indicate non-toxicity.
 - (i) NH₄⁻ : NO₃-N < 3
 - (ii) Ammonium < 500 ppm, dry basis
 - (iii) Seed Germination > 80 % of control
 - (iv) Plant Trials > 80% of control
 - (v) Solvita® > 5 Index value
- (6) Nutrient Content: provide analysis detailing nutrient content including N-P-K, Ca, Na, Mg, S, and B.
 - (i) Total Nitrogen content 0.9% or above preferred.
 - (ii) Boron: Total shall be <80 ppm; Soluble shall be <2.5 ppm
- (7) Salinity: Must be reported; < 6.0 mmhos/cm
- (8) pH shall be between 6.5 and 8. May vary with plant species.

- b. Compost for Bioretention Soil Texture – Compost for bioretention soils shall be analyzed by an accredited lab using #200, 1/4 inch, 1/2 inch, and 1 inch sieves (ASTM D 422 or as approved by municipality), and meet the following gradation:

Sieve Size	Percent Passing (by weight)	
	<i>Min</i>	<i>Max</i>
1 inch	99	100
1/2 inch	90	100
1/4 inch	40	90
No. 200	2	10

- c. Bulk density shall be between 500 and 1100 dry lbs/cubic yard
- d. Moisture content shall be between 30% - 55% of dry solids.
- e. Inerts – compost shall be relatively free of inert ingredients, including glass, plastic and paper, < 1 % by weight or volume.
- f. Weed seed/pathogen destruction – provide proof of process to further reduce pathogens (PFRP). For example, turned windrows must reach min. 55C for 15 days with at least 5 turnings during that period.
- g. Select Pathogens – Salmonella <3 MPN/4grams of TS, or Coliform Bacteria <10000 MPN/gram.
- h. Trace Contaminants Metals (Lead, Mercury, Etc.) – Product must meet US EPA, 40 CFR 503 regulations.
- i. Compost Testing – The compost supplier will test all compost products within 120 calendar days prior to application. Samples will be taken using the STA sample collection protocol. (The sample collection protocol can be obtained from the U.S. Composting Council, 4250 Veterans Memorial Highway, Suite 275, Holbrook, NY 11741 Phone: 631-737-4931, www.compostingcouncil.org). The sample shall be sent to an independent STA Program approved lab. The compost supplier will pay for the test.

VERIFICATION OF ALTERNATIVE BIORETENTION SOIL MIXES

Bioretention soils not meeting the above criteria shall be evaluated on a case by case basis. Alternative bioretention soil shall meet the following specification: “Soils for bioretention facilities shall be sufficiently permeable to infiltrate runoff at a minimum rate of 5 inches per hour during the life of the facility, and provide sufficient retention of moisture and nutrients to support healthy vegetation.”

The following steps shall be followed by municipalities to verify that alternative soil mixes meet the specification:

1. General Requirements – Bioretention soil shall achieve a long-term, in-place infiltration rate of at least 5 inches per hour. Bioretention soil shall also support vigorous plant growth. The applicant refers to the entity proposing the soil mixture for approval.

a. Submittals – The applicant must submit to the municipality for approval:

- (1) A sample of mixed bioretention soil.
- (2) Certification from the soil supplier or an accredited laboratory that the Bioretention Soil meets the requirements of this guideline specification.
- (3) Certification from an accredited geotechnical testing laboratory that the Bioretention Soil has an infiltration rate between 5 and 12 inches per hour as tested according to Section 1.b.(2)(ii).
- (4) Organic content test results of mixed Bioretention Soil. Organic content test shall be performed in accordance with by Testing Methods for the Examination of Compost and Composting (TMECC) 05.07A, “Loss-On-Ignition Organic Matter Method”.
- (5) Grain size analysis results of mixed bioretention soil performed in accordance with ASTM D 422, Standard Test Method for Particle Size Analysis of Soils.
- (6) A description of the equipment and methods used to mix the sand and compost to produce Bioretention Soil.
- (7) The name of the testing laboratory(s) and the following information:
 - (i) contact person(s)
 - (ii) address(s)
 - (iii) phone contact(s)
 - (iv) e-mail address(s)
 - (v) qualifications of laboratory(s), and personnel including date of current certification by STA, ASTM, or approved equal

b. Bioretention Soil

(1) Bioretention Soil Texture

Bioretention Soils shall be analyzed by an accredited lab using #200, and 1/2” inch sieves (ASTM D 422 or as approved by municipality), and meet the following gradation:

Sieve Size	Percent Passing (by weight)	
	<i>Min</i>	<i>Max</i>
1/2 inch	97	100
No. 200	2	5

(2) Bioretention Soil Permeability testing

Bioretention Soils shall be analyzed by an accredited geotechnical lab for the following tests:

- (i) Moisture – density relationships (compaction tests) shall be conducted on bioretention soil. Bioretention soil for the permeability test shall be compacted to 85 to 90 percent of the maximum dry density (ASTM D1557).
- (ii) Constant head permeability testing in accordance with ASTM D2434 shall be conducted on a minimum of two samples with a 6-inch mold and vacuum saturation.

MULCH FOR BIORETENTION FACILITIES

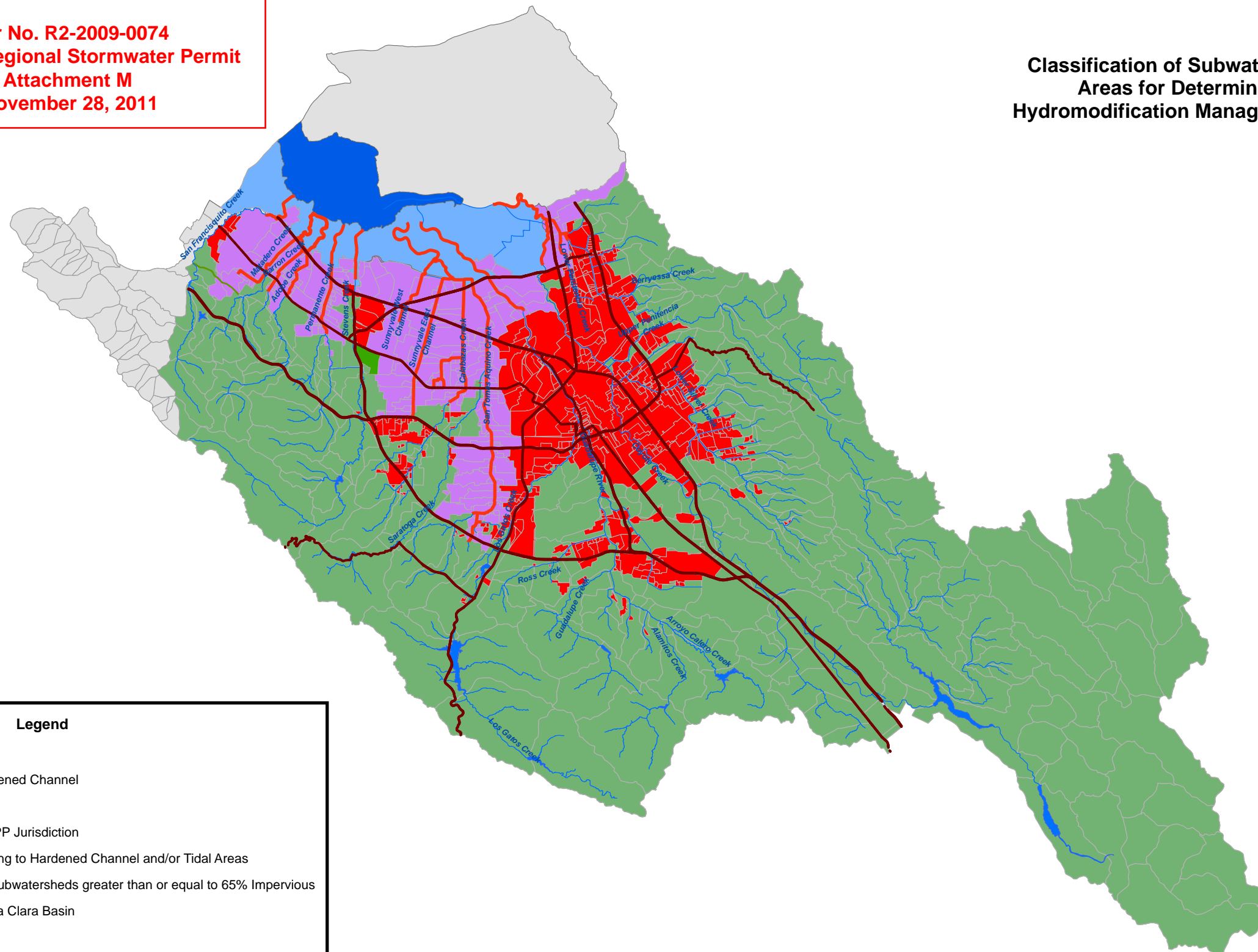
Mulch is recommended for the purpose of retaining moisture, preventing erosion and minimizing weed growth. Projects subject to the State's Model Water Efficiency Landscaping Ordinance (or comparable local ordinance) will be required to provide at least two inches of mulch. Aged mulch, also called compost mulch, reduces the ability of weeds to establish, keeps soil moist, and replenishes soil nutrients. Aged mulch can be obtained through soil suppliers or directly from commercial recycling yards. It is recommended to apply 1" to 2" of composted mulch, once a year, preferably in June following weeding.

ATTACHMENT M

Provision C.3.g. Santa Clara Permittees Revised Hydromodification Management Map

**Order No. R2-2009-0074
Municipal Regional Stormwater Permit
Attachment M
November 28, 2011**

**Classification of Subwatersheds and Catchment
Areas for Determining Applicability of
Hydromodification Management (HM) Requirements**



Legend

- Major Roads
- Continuously Hardened Channel
- Major Creeks
- Outside SCVURPPP Jurisdiction
- Catchments Draining to Hardened Channel and/or Tidal Areas
- Catchments and Subwatersheds greater than or equal to 65% Impervious
- Reservoirs in Santa Clara Basin
- Baylands
- Subwatersheds less than 65% Impervious

Revision Date: November 2010

This map contains revisions to the March 2009 version to reflect updated impervious surface data and/or catchment boundaries in the Cities of San Jose, Sunnyvale, Mountain View, and Milpitas, as described in the report to the Water Board dated October 14, 2010, consistent with the HM applicability criteria set forth in Attachment F, Section 4 of the MRP.

EXHIBIT 2

California Regional Water Quality Control Board San Francisco Bay Region Municipal Regional Stormwater NPDES Permit

Order No. R2-2015-0049
NPDES Permit No. CAS612008
November 19, 2015

FIND EFFECTIVE, ECO-FRIENDLY PRODUCTS

**For Healthy Gardens,
People, and Pets**

Look for this tag

Eco-friendly
Less-toxic Product

OUR WATER
OUR WORLD

www.ourwaterourworld.org

NO DUMPING! CALL 408.545.3000
FLOWS TO ALAMITOS CREEK
VEBAS LIR

The composite image consists of four distinct parts. The top-left section is a blue and orange promotional banner for 'OUR WATER OUR WORLD' products, featuring a 'Look for this tag' graphic and the website 'www.ourwaterourworld.org'. The top-right section shows a close-up of a stormwater drain with a concrete curb. A sign on the curb reads 'NO DUMPING! CALL 408.545.3000 FLOWS TO ALAMITOS CREEK' and 'VEBAS LIR'. The bottom-left section is a photograph of a stream flowing over a rocky bed, surrounded by lush green trees and vegetation. The bottom-right section is a photograph of a landscaped curb area with concrete curbs, mulch, and various green plants, with a few people visible in the background.

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**California Regional Water Quality Control Board
San Francisco Bay Region
Municipal Regional Stormwater NPDES Permit**

**ORDER No. R2-2015-0049
NPDES PERMIT No. CAS612008**

Issuing Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) Permit for the discharge of stormwater runoff from the municipal separate storm sewer systems (MS4s) of the following jurisdictions and entities, which are permitted under this San Francisco Bay Municipal Regional Stormwater Permit (MRP):

The cities of Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, and Union City, Alameda County, the Alameda County Flood Control and Water Conservation District, and Zone 7 of the Alameda County Flood Control and Water Conservation District, which have joined together to form the Alameda Countywide Clean Water Program (Alameda Permittees)

The cities of Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, the Contra Costa County Flood Control and Water Conservation District, which have joined together to form the Contra Costa Clean Water Program (Contra Costa Permittees)

The cities of Campbell, Cupertino, Los Altos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, and Sunnyvale, the towns of Los Altos Hills and Los Gatos, the Santa Clara Valley Water District, and Santa Clara County, which have joined together to form the Santa Clara Valley Urban Runoff Pollution Prevention Program (Santa Clara Permittees)

The cities of Belmont, Brisbane, Burlingame, Daly City, East Palo Alto, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Redwood City, San Bruno, San Carlos, San Mateo, and South San Francisco, the towns of Atherton, Colma, Hillsborough, Portola Valley, and Woodside, the San Mateo County Flood Control District, and San Mateo County, which have joined together to form the San Mateo Countywide Water Pollution Prevention Program (San Mateo Permittees)

The cities of Fairfield and Suisun City, which have joined together to form the Fairfield-Suisun Urban Runoff Management Program (Fairfield-Suisun Permittees)

The City of Vallejo and the Vallejo Sanitation and Flood Control District (Vallejo Permittees)

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The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter referred to as the Water Board) finds that:

FINDINGS

Incorporation of Fact Sheet

1. The Fact Sheet for the San Francisco Bay Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (Attachment A) includes cited regulatory and legal references and additional explanatory information in support of the requirements of this Permit. The Fact Sheet, including any supplements thereto, is hereby incorporated by reference.

Existing Permit

2. **Alameda County**—The cities of Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, and Union City, Alameda County (Unincorporated area), the Alameda County Flood Control and Water Conservation District, and Zone 7 of the Alameda County Flood Control and Water Conservation District have joined together to form the Alameda Countywide Clean Water Program (hereinafter collectively referred to as the Alameda Permittees) and have submitted a permit application (Report of Waste Discharge), dated May 30, 2014, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Alameda Permittees' jurisdictions. The Alameda Permittees are currently subject to NPDES Permit No. CAS612008 issued by Order No. R2-2009-0074 on October 14, 2009, and amended by Order No. R2-2011-0083 on November 28, 2011, to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.
3. **Contra Costa County**—The cities of Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District have joined together to form the Contra Costa Clean Water Program (hereinafter collectively referred to as the Contra Costa Permittees) and have submitted a permit application (Report of Waste Discharge), dated June 2, 2014, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Contra Costa Permittees' jurisdictions. The Contra Costa Permittees are currently subject to NPDES Permit No. CAS612008 issued by Order No. R2-2009-0074 on October 14, 2009, and amended by Order No. R2-2011-0083 on November 28, 2011, to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.
4. **San Mateo County**—The cities of Belmont, Brisbane, Burlingame, Daly City, East Palo Alto, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Redwood City, San Bruno, San Carlos, San Mateo, and South San Francisco, the towns of Atherton, Colma, Hillsborough, Portola Valley, and Woodside, the San Mateo County Flood Control District and San Mateo County have joined together to form the San Mateo Countywide Water

Pollution Prevention Program (hereinafter collectively referred to as the San Mateo Permittees) and have submitted a permit application (Report of Waste Discharge), dated May 30, 2014, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the San Mateo Permittees' jurisdictions. The San Mateo Permittees are currently subject to NPDES Permit No. CAS612008 issued by Order No. R2-2009-0074 on October 14, 2009, and amended by Order No. R2-2011-0083 on November 28, 2011, to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.

5. **Santa Clara County**—The cities of Campbell, Cupertino, Los Altos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, and Sunnyvale, the towns of Los Altos Hills and Los Gatos, the Santa Clara Valley Water District, and the County of Santa Clara have joined together to form the Santa Clara Valley Urban Runoff Pollution Prevention Program (hereinafter collectively referred to as the Santa Clara Permittees) and have submitted a permit application (Report of Waste Discharge), dated May 29, 2014, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Santa Clara Permittees' jurisdictions. The Santa Clara Permittees are currently subject to NPDES Permit No. CAS612008 issued by Order No. R2-2009-0074 on October 14, 2009, and amended by Order No. R2-2011-0083 on November 28, 2011, to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.
6. **Fairfield-Suisun**—The cities of Fairfield and Suisun City have joined together to form the Fairfield-Suisun Urban Runoff Management Program (hereinafter referred to as the Fairfield-Suisun Permittees) and have submitted a permit application (Report of Waste Discharge), dated June 2, 2014, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Fairfield-Suisun Permittees' jurisdictions. The Fairfield-Suisun Permittees are currently subject to NPDES Permit No. CAS0612008 issued by Order No. R2-2009-0074 on October 14, 2009, and amended by Order No. R2-2011-0083 on November 28, 2011, to discharge stormwater runoff from storm drains and watercourses within their jurisdictions.
7. **Vallejo**—The City of Vallejo and the Vallejo Sanitary District (hereinafter referred to as the Vallejo Permittees) have submitted permit applications (Report of Waste Discharge), dated July 3 and June 2, 2014, respectively, for reissuance of their waste discharge requirements under the NPDES permit to discharge stormwater runoff from storm drains and watercourses within the Vallejo Permittees' jurisdictions. The Vallejo Permittees are currently subject to NPDES Permit No. CAS612008 issued by Order No. R2-2009-0074 on October 14, 2009, and amended by Order No. R2-2011-0083, to discharge stormwater runoff from storm drains and watercourses within the their jurisdictions.
8. The Alameda, Contra Costa, San Mateo, Santa Clara, Fairfield-Suisun, and Vallejo Permittees are hereinafter referred to in this Order as the Permittees.

Applicable Federal, State and Regional Regulations

9. Section 402(p) of the federal Clean Water Act (CWA), as amended by the Water Quality Act of 1987, requires NPDES permits for stormwater discharges from municipal separate storm sewer systems (MS4s), stormwater discharges associated with industrial activity (including

construction activities), and designated stormwater discharges, which are considered significant contributors of pollutants to waters of the United States. On November 16, 1990, USEPA published regulations (40 CFR Part 122), which prescribe permit application requirements for MS4s pursuant to CWA 402(p). On May 17, 1996, USEPA published an Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems, which provided guidance on permit application requirements for regulated MS4s.

10. The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Water Board and approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law, and USEPA, where required.
11. The Water Board finds stormwater discharges from urban and developing areas in the San Francisco Bay Region to be significant sources of certain pollutants that cause or may be causing or threatening to cause or contribute to water quality impairment in waters of the Region. Furthermore, as delineated in the CWA section 303(d) list, the Water Board has found that there is a reasonable potential that municipal stormwater discharges cause or may cause or contribute to an excursion above water quality standards for the following pollutants: mercury, PCBs, furans, dieldrin, chlordane, DDT, trash, and selenium in San Francisco Bay segments; pesticide associated toxicity, and trash in urban creeks; and trash and low dissolved oxygen in Lake Merritt, in Alameda County. In accordance with CWA section 303(d), the Water Board is required to establish Total Maximum Daily Loads (TMDLs) for these pollutants to these waters to gradually eliminate impairment and attain water quality standards. Therefore, pollutant control actions and further pollutant impact assessments by the Permittees are warranted and required pursuant to this Order.
12. Under section 13389 of the California Water Code, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA).

Nature of Discharges and Sources of Pollutants

13. Stormwater runoff is generated from various land uses in all the hydrologic sub-basins in the Basin and discharges into watercourses, which in turn flow into Central, Lower and South San Francisco Bay, and Suisun and San Pablo Bays.
14. The quality and quantity of runoff discharges vary considerably and are affected by hydrology, geology, land use, season, and sequence and duration of hydrologic events. Pollutants of concern in these discharges are certain heavy metals; excessive sediment production from erosion due to anthropogenic activities; petroleum hydrocarbons from sources such as used motor oil; microbial pathogens of domestic sewage origin from illicit discharges; certain pesticides associated with acute aquatic toxicity; excessive nutrient loads, which can cause or contribute to the depletion of dissolved oxygen and/or toxic concentrations of dissolved ammonia; trash, which impairs beneficial uses including, but not

limited to, support for aquatic life; and other pollutants that can cause aquatic toxicity in the receiving waters.

15. Federal, State or regional entities within the Permittees' boundaries, not currently named in this Order, operate storm drain facilities and/or discharge stormwater to the storm drains and watercourses covered by this Order. The Permittees may lack jurisdiction over these entities. Consequently, the Water Board recognizes that the Permittees should not be held responsible for such facilities and/or discharges. The Water Board will consider such facilities for coverage under its NPDES permitting scheme pursuant to USEPA stormwater regulations.
16. Certain pollutants present in stormwater and/or urban runoff can be derived from extraneous sources over which the Permittees have limited or no direct jurisdiction. Examples of such pollutants and their respective sources are polycyclic aromatic hydrocarbons (PAHs), which are products of internal combustion engine operation and other sources; heavy metals, such as copper from vehicle brake pad wear and zinc from vehicle tire wear; dioxins as products of combustion; polybrominated diphenyl ethers that are incorporated in many household products as flame retardants; mercury resulting from atmospheric deposition; and naturally occurring minerals from local geology. All these pollutants, and others, can be deposited on paved surfaces, rooftops, and other impervious surfaces as fine airborne particles—thus yielding stormwater runoff pollution that is unrelated to the activity associated with a given project site.
17. The Water Board will notify interested agencies and interested persons of the availability of reports, plans, and schedules, including Annual Reports, and will provide interested persons with an opportunity for a public hearing and/or an opportunity to submit their written views and recommendations. The Water Board will consider all comments and may modify the reports, plans, or schedules or may modify this Order in accordance with applicable law. All submittals required by this Order conditioned with acceptance by the Water Board will be subject to these notification, comment, and public hearing procedures.
18. The Water Board notified the Permittees and interested agencies and persons of its intent to adopt this Order and provided an opportunity to submit written comments and recommendations.
19. The Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.
20. This Order supersedes and rescinds Order Nos. R2-2009-0074 and R2-2011-0083.
21. This Order serves as a NPDES permit, pursuant to CWA section 402, or amendments thereto, and shall become effective January 1, 2016, provided the Regional Administrator, USEPA, Region 9, has no objections.

THEREFORE, IT IS HEREBY ORDERED that Order No. R2-2009-0074 and R2-2011-0183 are rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions of Water Code division 7 (commencing with § 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Permittees shall comply with the following requirements in this Order. This action in no way prevents the Water Board from taking enforcement action for past violations of the previous orders.

A. DISCHARGE PROHIBITIONS

- A.1.** The Permittees shall, within their respective jurisdictions, effectively prohibit the discharge of non-stormwater (materials other than stormwater) into storm drain systems and watercourses. NPDES-permitted discharges are exempt from this prohibition. Provision C.15 describes a tiered categorization of non-stormwater discharges based on potential for pollutant content that may be discharged upon adequate assurance that the discharge contains no pollutants of concern at concentrations that will impact beneficial uses or cause exceedances of water quality standards.
- A.2.** It shall be prohibited to discharge rubbish, refuse, bark, sawdust, or other solid wastes into surface waters or at any place where they would contact or where they would be eventually transported to surface waters, including flood plain areas.

B. RECEIVING WATER LIMITATIONS

- B.1.** The discharge shall not cause the following conditions to create a condition of nuisance or to adversely affect beneficial uses of waters of the State:
- a.** Floating, suspended, or deposited macroscopic particulate matter, or foam;
 - b.** Bottom deposits or aquatic growths;
 - c.** Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d.** Visible, floating, suspended, or deposited oil or other products of petroleum origin; and
 - e.** Substances present in concentrations or quantities that would cause deleterious effects on aquatic biota, wildlife, or waterfowl, or that render any of these unfit for human consumption.
- B.2.** The discharge shall not cause or contribute to a violation of any applicable water quality standard for receiving waters. If applicable water quality objectives are adopted and approved by the State Water Board after the date of the adoption of this Order, the Water Board may revise and modify this Order as appropriate.

C.1. Compliance with Discharge Prohibitions and Receiving Waters Limitations

The Permittees shall comply with Discharge Prohibitions A.1 and A.2 and Receiving Water Limitations B.1 and B.2 through the timely implementation of control measures and other actions as specified in Provisions C.2 through C.15. Compliance with Provisions C.9 through C.12 and C.14 of this Order, which prescribe requirements and schedules for Permittees identified therein to manage their discharges that may cause or contribute to violations of water quality standards (WQS) for pesticides, trash, mercury, polychlorinated biphenyls (PCBs), and bacteria, shall constitute compliance during the term of this Order with Receiving Water Limitations B.1 and B.2 for the pollutants and the receiving waters identified in the provisions. Compliance with Provision C.10, which prescribes requirements and schedules for Permittees to manage their discharges of trash, shall also constitute compliance with Discharge Prohibitions A.1 and A.2 during the term of this Order for discharges of trash. If exceedance(s) of (WQS), except for exceedances of water quality standards for pesticides, trash, mercury, PCBs, and bacteria that are managed pursuant to Provisions C.9 through C.12 and C.14, persist in receiving waters notwithstanding the implementation of the required controls and actions, the Permittees shall comply with the following procedure:

- a. Upon a determination by either the Permittee(s) or the Water Board that discharges are causing or contributing to an exceedance of an applicable (WQS), the Permittee(s) shall notify, within no more than 30 days, and thereafter submit a report to the Water Board that describes controls or best management practices (BMPs) that are currently being implemented, and the current level of implementation, and additional controls or BMPs that will be implemented, and/or an increased level of implementation, to prevent or reduce the discharge of pollutants that are causing or contributing to the exceedance of water quality standards. The report may be submitted in conjunction with the Annual Report, unless the Water Board directs an earlier submittal, and shall constitute a request to the Water Board for amendment of this NPDES Permit. The report and application for amendment shall include an implementation schedule. The Water Board may require modifications to the report and application for amendment; and
- b. Submit any modifications to the report required by the Water Board within 30 days of notification.

As long as Permittees have complied with the procedures set forth above, they do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the Water Board to develop additional control measures and BMPs and reinitiate the Permit amendment process.

C.2. Municipal Operations

The purpose of this provision is to ensure implementation of appropriate BMPs by all Permittees to control and reduce non-stormwater and polluted stormwater discharges to storm drains and watercourses during operation, inspection, and routine repair and maintenance activities of municipal facilities and infrastructure.

C.2.a. Street and Road Repair and Maintenance

i. Task Description – Asphalt/Concrete Removal, Cutting, Installation, and Repair

The Permittees shall implement appropriate BMPs at street and road repair and/or maintenance sites to control debris and waste materials during road and parking lot installation, repaving, or repair maintenance activities, such as those described in the California Stormwater Quality Association's (CASQA's) Handbook for Municipal Operations.

ii. Implementation Levels

- (1) The Permittees shall require proper management of concrete slurry and wastewater, asphalt, pavement cutting, and other street and road maintenance materials and wastewater to avoid discharge to storm drains from such work sites. The Permittees shall coordinate with sanitary sewer agencies to determine if disposal to the sanitary sewer system is available for the wastewater generated from these activities provided that appropriate approvals are obtained and pretreatment standards are met.
- (2) The Permittees shall require sweeping and/or vacuuming to remove debris, concrete, or sediment residues from such work sites upon completion of work. The Permittees shall require cleanup of all construction debris, spills, and leaks using dry methods (e.g., absorbent materials, rags, pads, and vacuuming), as described in the Bay Area Stormwater Management Agencies Association's (BASMAA's) Blueprint for a Clean Bay.

iii. Reporting – The Permittees shall report on implementation of and compliance with these BMPs in the Annual Report.

C.2.b. Sidewalk/Plaza Maintenance and Pavement Washing

- i. Task Description –** The Permittees shall implement and require to be implemented BMPs that prevent the discharge of polluted wash water and non-stormwater to storm drains for pavement washing; sidewalk and plaza cleaning; mobile cleaning; pressure washing operations in locations such as parking lots and garages; trash areas; and gas station fueling areas. The Permittees shall implement the BMPs included in BASMAA's Mobile Surface Cleaner Program. The Permittees shall coordinate with sanitary sewer agencies to determine if disposal to the sanitary sewer is available for the wastewater generated from these activities provided that appropriate approvals and pretreatment standards are met.

- ii. **Reporting** – The Permittees shall report on implementation of and compliance with these BMPs in their Annual Report.

C.2.c. Bridge and Structure Maintenance and Graffiti Removal

i. Task Description

- (1) The Permittees shall implement appropriate BMPs to prevent polluted stormwater and non-stormwater discharges from bridges and structural maintenance activities directly over water or into storm drains.
- (2) The Permittees shall implement BMPs for graffiti removal that prevent non-stormwater and wash water discharges into storm drains.

ii. Implementation Levels

- (1) The Permittees shall prevent all debris, including structural materials and coating debris, such as paint chips, and other debris and pollutants generated in bridge and structure maintenance or graffiti removal from entering storm drains or water courses.
- (2) The Permittees shall protect nearby storm drain inlets before removing graffiti from walls, signs, sidewalks, or other structures. The Permittees shall prevent any discharge of debris, cleaning compound waste, paint waste, or wash water due to graffiti removal from entering storm drains or watercourses.
- (3) The Permittees shall use proper disposal methods for wastes generated from these activities. The Permittees shall train their employees and/or specify in contracts the proper capture and disposal methods for the wastes generated.

- iii. **Reporting** – The Permittees shall report on implementation of and compliance with these BMPs in their Annual Report.

C.2.d. Stormwater Pump Stations

- i. **Task Description** –The Permittees shall implement measures to operate, inspect, and maintain stormwater pump stations to eliminate non-stormwater discharges containing pollutants, and to reduce pollutant loads in stormwater discharges to comply with WQSs.

- ii. **Implementation Levels** – The Permittees shall comply with the following at Permittee-owned or -operated pump stations:

- (1) Upon becoming aware that the discharge from a pump station has a dissolved oxygen (DO) concentration below 3.0 mg/L, implement corrective actions, such as continuous pumping at a low flow rate, aeration, or other appropriate methods to maintain DO concentrations of the discharge above 3 milligrams per liter (mg/L) and verify the effectiveness of the corrective actions with monitoring. Corrective actions do not need to be implemented on discharges from pump stations that

remain in the stormwater collection system or infiltrate into a dry creek immediately downstream.

- (2) Ensure that pump stations are free from debris and trash and replace any oil absorbent booms, as needed, and investigate and abate illicit discharges. Pump stations excluded from C.2.d.ii.(1) above are not excluded from this requirement.
- (3) The Permittees shall maintain records of inspection, maintenance, implementation of corrective actions, and any monitoring records at Permittee-owned or -operated pumped stations. These records shall be made available to Water Board staff or its representatives during inspections and audits, or otherwise upon request.

C.2.e. Rural Public Works Construction and Maintenance

i. Task Description – Rural Road and Public Works Construction and Maintenance

For the purpose of this provision, rural means any watershed or portion thereof that is developed with large lot home-sites, such as one acre or larger, or with primarily agricultural, grazing, or open space uses. The Permittees shall implement and require contractors to implement BMPs for erosion and sediment control during and after construction for maintenance activities on rural roads, particularly in or adjacent to stream channels or wetlands. The Permittees shall notify the Water Board, the California Department of Fish and Wildlife (CDFW), and the U.S. Army Corps of Engineers, where applicable, and obtain appropriate agency permits for rural public works activities before work in or near creeks and wetlands.

ii. Implementation Level

- (1) The Permittees shall continue to implement BMPs for erosion and sediment control measures during construction and maintenance activities on rural roads, including developing and implementing appropriate training and technical assistance resources for rural public works activities.
- (2) The Permittees shall implement appropriate BMPs for the following activities. BMPs shall minimize impacts on streams and wetlands in the course of rural road and public works maintenance and construction activities:
 - (a) Road design, construction, maintenance, and repairs in rural areas that prevent and control road-related erosion and sediment transport;
 - (b) Identification and prioritization of rural road maintenance on the basis of soil erosion potential, slope steepness, and stream habitat resources;
 - (c) Construction of roads and culverts that do not impact creek functions. New or replaced culverts shall not create a migratory fish passage barrier, where migratory fish are present, or lead to stream instability;

- (d) Implementation of an inspection program to maintain rural roads' structural integrity and prevent impacts to water quality;
 - (e) Maintenance of rural roads adjacent to streams and riparian habitat to reduce erosion, replace damaging shotgun culverts, and address excessive erosion;
 - (f) Re-grading of unpaved rural roads to slope outward where consistent with road engineering safety standards, and installation of water bars as appropriate; and
 - (g) Replacement of existing culverts or design of new culverts or bridge crossings shall use measures to reduce erosion, provide fish passage, and maintain natural stream geomorphology in a stable manner.
- (3) The Permittees shall incorporate existing training and guidance on permitting requirements for rural public works activities so as to stress the importance of proper planning and construction to avoid water quality impacts.
 - (4) The Permittees shall provide training incorporating these BMPs to rural public works maintenance staff at least twice within this Permit term.
- iii. Reporting** – The Permittees shall report on the implementation of and compliance with BMPs for the rural public works construction and maintenance activities in their Annual Report, including reporting on increased maintenance in priority areas.

C.2.f. Corporation Yard BMP Implementation

i. Task Description – Corporation Yard Maintenance

- (1) The Permittees shall implement and maintain a site-specific Stormwater Pollution Prevention Plan (SWPPP) for corporation yards, including municipal vehicle maintenance, heavy equipment, and maintenance vehicle parking areas, and material storage facilities, to comply with water quality standards. Each SWPPP shall incorporate all applicable BMPs that are described in the California Stormwater Quality Association's (CASQA's) Handbook for Municipal Operations and the Caltrans Storm Water Quality Handbook Maintenance Staff Guide, May 2003, and its addenda, as appropriate.
- (2) The requirements in this provision shall apply only to facilities that are not covered under the State Water Board's Industrial Stormwater NPDES General Permit.

ii. Implementation Level

- (1) Implement BMPs to minimize pollutant discharges in stormwater and prohibit non-stormwater discharges, such as wash waters and street sweeper, vactor, and other related equipment wash water. Pollution control actions shall include, but not be limited to, good housekeeping practices, material and waste storage control, and vehicle leak and spill control.

- (2) Routinely inspect corporation yards to ensure that non-stormwater discharges are not entering the storm drain system and pollutant discharges are prevented to the maximum extent practicable. At a minimum, each corporation yard shall be fully inspected each year between September 1 and September 30, beginning the 2016-2017 reporting year. Active non-stormwater discharges shall cease immediately. Corrective actions shall be implemented before the next rain event, but no longer than 10 business days after the potential and/or actual discharges are discovered. Corrective actions can be temporary and more time can be allowed for permanent corrective actions. If more than 10 business days are required for compliance, a rationale shall be recorded.
- (3) Plumb all vehicle and equipment wash areas to the sanitary sewer after coordination with the local sanitary sewer agency and equip with a pretreatment device (if necessary) in accordance with the requirements of the local sanitary sewer agency.
- (4) Use dry cleanup methods when cleaning debris and spills from corporation yards. If wet cleaning methods must be used (e.g., pressure washing), the Permittee shall ensure that wash water is collected and disposed in the sanitary sewer after coordination with the local sanitary sewer agency and in accordance with the requirements of the local sanitary sewer agency. Any private companies hired by the Permittee to perform cleaning activities on Permittee-owned property shall follow the same requirements. In areas where sanitary sewer connection is not available, the Permittees shall collect and haul the wash water to a municipal wastewater treatment plant, or implement appropriate BMPs and dispose of the wastewater to land in a manner that does not adversely impact surface water or groundwater.
- (5) Outdoor storage areas containing pollutants shall be covered and/or bermed to prevent discharges of polluted stormwater runoff or run-on to storm drain inlets.

iii. Reporting

- (1) In the 2015-2016 Annual Report, Permittees shall report on implementation of SWPPPs, the results of inspections, and any followup actions in their Annual Report.
- (2) Beginning with the 2016-2017 Annual Report, Permittees shall list activities conducted in the corporation yards that have BMPs in the site-specific SWPPP, date of inspections, the results of inspections, and any followup actions, including the date of any necessary corrective actions implemented, in their Annual Report.

C.3. New Development and Redevelopment

The goal of Provision C.3 is for the Permittees to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address stormwater runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.

C.3.a. New Development and Redevelopment Performance Standard Implementation

i. Task Description – At a minimum, each Permittee shall:

- (1) Have adequate legal authority to implement all requirements of Provision C.3;
- (2) Have adequate development review and permitting procedures to impose conditions of approval or other enforceable mechanisms to implement the requirements of Provision C.3. For projects discharging directly to CWA section 303(d)-listed waterbodies, conditions of approval must require that post-development runoff not exceed pre-development levels for such pollutants that are listed;
- (3) Evaluate potential water quality effects and identify appropriate mitigation measures when conducting environmental reviews, such as under CEQA;
- (4) Provide training adequate to implement the requirements of Provision C.3 for staff, including interdepartmental training;
- (5) Provide outreach adequate to implement the requirements of Provision C.3, including providing education materials to municipal staff, developers, contractors, construction site operators, and owner/builders, early in the planning process and as appropriate;
- (6) For all new development and redevelopment projects that are subject to the Permittee's planning, building, development, or other comparable review, but not regulated by Provision C.3, encourage the inclusion of adequate site design measures that may include minimizing land disturbance and impervious surfaces (especially parking lots); clustering of structures and pavement; directing roof runoff to vegetated areas; use of micro-detention, including distributed landscape-based detention; preservation of open space; protection and/or restoration of riparian areas and wetlands as project amenities;
- (7) For all new development and redevelopment projects that are subject to the Permittee's planning, building, development, or other comparable review, but not regulated by Provision C.3, encourage the inclusion of adequate source control measures to limit pollutant generation, discharge, and runoff. These source control measures should include:
 - Storm drain inlet stenciling.

- Landscaping that minimizes irrigation and runoff, promotes surface infiltration where possible, minimizes the use of pesticides and fertilizers, and incorporates appropriate sustainable landscaping practices and programs, such as Bay-Friendly Landscaping.
 - Appropriate covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas.
 - Covered trash, food waste, and compactor enclosures.
 - Plumbing of the following discharges to the sanitary sewer, subject to the local sanitary sewer agency's regulations and standards:
 - Discharges from indoor floor mat/equipment/hood filter wash racks or covered outdoor wash racks for restaurants.
 - Dumpster drips from covered trash and food compactor enclosures.
 - Discharges from outdoor covered wash areas for vehicles, equipment, and accessories.
 - Swimming pool water, if discharge to onsite vegetated areas is not a feasible option.
 - Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option.
- (8) Revise, as necessary, General Plans to integrate water quality and watershed protection with water supply, flood control, habitat protection, groundwater recharge, and other sustainable development principles and policies (e.g., referencing the Bay-Friendly Landscape Guidelines).
- ii. **Reporting** – Provide a brief summary of the method(s) of implementation of Provisions C.3.a.i.(1)–(8) in the 2016 Annual Report.

C.3.b. Regulated Projects

- i. **Task Description** – The Permittees shall require all projects fitting the category descriptions listed in Provision C.3.b.ii. below (hereinafter called Regulated Projects) to implement LID source control, site design, and stormwater treatment onsite or at a joint stormwater treatment facility¹ in accordance with Provisions C.3.c. and C.3.d., unless the Provision C.3.e. alternate compliance options are invoked. For adjacent Regulated Projects that will discharge runoff to a joint stormwater treatment facility, the treatment facility must be completed by the end of construction of the first Regulated Project that will be discharging runoff to the joint stormwater treatment facility.
- (1) Any Regulated Project that has been approved with stormwater treatment measures in compliance with Provision C.3.d. under a previous MS4

¹ **Joint stormwater treatment facility** – Stormwater treatment facility built to treat the combined runoff from two or more Regulated Projects.

permit is exempt from the requirements of Provision C.3.c. (low impact development requirements).

- (2) Any Regulated Project that was approved with no Provision C.3. stormwater treatment requirements under a previous MS4 permit and that has not begun construction by the effective date of this permit, shall be required to fully comply with the requirements of C.3.c. and C.3.d. Permittees may grant exemptions from this requirement as follows:
 - (a) An exemption may be granted to:
 - (i) Any Regulated Project that was previously approved with a vesting tentative map that confers a vested right to proceed with development in substantial compliance with the ordinance, policies, and standards in effect at the time the vesting tentative map was approved or conditionally approved, as allowed by State law.
 - (ii) Any Regulated Project for which the Permittee has no legal authority to require changes to previously granted approvals, such as projects that have been granted building permits.
 - (b) An exemption from the LID requirements of Provision C.3.c. may be granted to any Regulated Project as long as stormwater treatment with media filters is provided that comply with the hydraulic sizing requirements of Provision C.3.d.

Regulated Projects, as they are defined in this Provision, do not include detached single-family home projects that are not part of a larger plan of development.

ii. Regulated Projects are defined in the following categories:

- (1) **Special Land Use Categories**
 - (a) **New Development or redevelopment projects** that fall into one of the categories listed below and that create and/or replace 5000 square feet or more of impervious surface (collectively over the entire project site). This category includes development projects of the following four types on public or private land that fall under the planning and building authority of a Permittee:
 - (i) Auto service facilities, described by the following Standard Industrial Classification (SIC) Codes: 5013, 5014, 5541, 7532-7534, and 7536-7539;
 - (ii) Retail gasoline outlets;
 - (iii) Restaurants (SIC Code 5812); or
 - (iv) Stand-alone uncovered parking lots and uncovered parking lots that are part of a development project if the parking lot creates and/or replaces 5,000 square feet or more of impervious surface. This category includes the top uncovered portion of parking structures, unless drainage from the uncovered portion is

connected to the sanitary sewer along with the covered portions of the parking structure.

- (b) For redevelopment projects in the categories specified in Provision C.3.b.ii.(1)(a)(i)-(iv), specific exclusions are:
 - (i) Interior remodels; and
 - (ii) Routine maintenance or repair such as:
 - roof or exterior wall surface replacement, and/or
 - pavement resurfacing within the existing footprint.
- (c) Where a redevelopment project in the categories specified in Provision C.3.b.ii.(1)(a)(i)-(iv) results in an alteration of **50 percent or more** of the impervious surface of a previously existing development that was not subject to Provision C.3, the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire redevelopment project).
- (d) Where a redevelopment project in the categories specified in Provision C.3.b.ii.(1)(a)(i)-(iv) results in an alteration of **less than 50 percent** of the impervious surface of a previously existing development that was not subject to Provision C.3, only the new and/or replaced impervious surface of the project must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the new and/or replaced impervious surface of the project).

(2) **Other Development Projects**

New development projects that create 10,000 square feet or more of impervious surface (collectively over the entire project site) including commercial, industrial, residential housing subdivisions (i.e., detached single-family home subdivisions, multi-family attached subdivisions (town homes), condominiums, and apartments), mixed-use, and public projects. This category includes development projects on public or private land that fall under the planning and building authority of a Permittee. Detached single-family home projects that are not part of a larger plan of development are specifically excluded.

(3) **Other Redevelopment Projects**

Redevelopment projects that create and/or replace 10,000 square feet or more of impervious surface (collectively over the entire project site) including commercial, industrial, residential housing subdivisions (i.e., detached single-family home subdivisions, multi-family attached subdivisions (town homes), condominiums, and apartments), mixed-use, and public projects. Redevelopment is any land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred. This

category includes redevelopment projects on public or private land that fall under the planning and building authority of a Permittee.

Specific exclusions to this category are:

- Interior remodels; and
 - Routine maintenance or repair such as:
 - roof or exterior wall surface replacement, and/or
 - pavement resurfacing within the existing footprint.
- (a) Where a redevelopment project results in an alteration of **50 percent or more** of the impervious surface of a previously existing development that was not subject to Provision C.3, the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire redevelopment project).
- (b) Where a redevelopment results in an alteration of **less than 50 percent** of the impervious surface of a previously existing development that was not subject to Provision C.3., only the new and/or replaced impervious surface of the project must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the new and/or replaced impervious surface of the project).
- (4) **Road Projects**
- Any of the following types of road projects that create 10,000 square feet or more of newly constructed contiguous impervious surface and that fall under the building and planning authority of a Permittee:
- (a) Construction of new streets or roads, including sidewalks and bicycle lanes built as part of the new streets or roads.
- (b) Widening of existing streets or roads with additional traffic lanes.
- (i) Where the addition of traffic lanes results in an alteration of more than 50 percent of the impervious surface of an existing street or road within the project that was not subject to Provision C.3, the entire project, consisting of all existing, new, and/or replaced impervious surfaces, shall be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat stormwater runoff from the entire street or road that had additional traffic lanes added).
- (ii) Where the addition of traffic lanes results in an alteration of less than 50 percent of the impervious surface of an existing street or road within the project that was not subject to Provision C.3, only the new and/or replaced impervious surface of the project must be included in the treatment system design (i.e., stormwater treatment systems must be designed and sized to treat

stormwater runoff from only the new traffic lanes). However, if the stormwater runoff from the existing traffic lanes and the added traffic lanes cannot be separated, any onsite treatment system shall be designed and sized to treat stormwater runoff from the entire street or road. If an offsite treatment system is installed or in-lieu fees paid in accordance with Provision C.3.e, the offsite treatment system or in-lieu fees must address only the stormwater runoff from the added traffic lanes.

- (c) Construction of impervious trails that are greater than 10 feet wide or are creek-side (within 50 feet of the top of bank).
- (d) Specific exclusions to Provisions C.3.b.ii.(4)(a)-(c) include the following:
 - Sidewalks built as part of new streets or roads and built to direct stormwater runoff to adjacent vegetated areas.
 - Bicycle lanes built as part of new streets or roads but are not hydraulically connected to the new streets or roads and that direct stormwater runoff to adjacent vegetated areas.
 - Impervious trails built to direct stormwater runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees.
 - Sidewalks, bicycle lanes, or trails constructed with permeable surfaces.²
 - Caltrans highway projects and associated facilities.

iii. Implementation Level – All elements of Provision C.3.b.i.-ii. shall be fully implemented immediately, including a database or equivalent tabular format that contains all the information listed under Reporting (Provision C.3.b.iv.)

iv. Reporting

(1) **C.3.b.i.(2) Reporting**

In the 2017 Annual Report, each Permittee shall provide a complete list of the development projects that are subject to the requirements of Provision C.3.b.i.(2). For each such project, the Permittee shall indicate the type of stormwater treatment system required or the specific exemption granted, pursuant to Provision C.3.b.i.(2)(a) and (b). If a Permittee has no projects subject to Provision C.3.b.i.(2), it shall so state in the 2017 Annual Report.

(2) **Annual Reporting – C.3.b.ii. Regulated Projects**

For each Regulated Project approved during the fiscal year reporting period, the following information shall be reported electronically in the

² Permeable surfaces include pervious concrete, porous asphalt, unit pavers, and granular materials.

fiscal year Annual Report, in tabular form (as set forth in the attached Provision C.3.b. Sample Reporting Table):

- (a) Project Name, Number, Location (cross streets), and Street Address;
- (b) Name of Developer, Phase No. (if project is being constructed in phases, each phase should have a separate entry), Project Type (e.g., commercial, industrial, multi-unit residential, mixed-use, public), and description;
- (c) Project watershed;
- (d) Total project site area and total area of land disturbed;
- (e) Total new impervious surface area and/or total replaced impervious surface area;
- (f) If redevelopment or road widening project, total pre-project impervious surface area and total post-project impervious surface area;
- (g) Status of project (e.g., application date, application deemed complete date, project approval date);
- (h) Source control measures;
- (i) Site design measures;
- (j) All post-construction stormwater treatment systems installed onsite, at a joint stormwater treatment facility, and/or at an offsite location;
- (k) Operation and maintenance responsibility mechanism for the life of the project;
- (l) Hydraulic Sizing Criteria used;
- (m) Alternative compliance measures for Regulated Project (if applicable)
 - (i) If alternative compliance will be provided at an offsite location in accordance with Provision C.3.e.i.(1), include information required in Provision C.3.b.iv.(2)(a) – (l) for the offsite project; and
 - (ii) If alternative compliance will be provided by paying in-lieu fees in accordance with Provision C.3.e.i.(2), provide information required in Provision C.3.b.iv.(2)(a) – (l) for the Regional Project. Additionally, provide a summary of the Regional Project's goals, duration, estimated completion date, total estimated cost of the Regional Project, and estimated monetary contribution from the Regulated Project to the Regional Project; and
- (n) Hydromodification (HM) Controls (see Provision C.3.g.) – If not required, state why not. If required, state control method used.

C.3.c. Low Impact Development (LID)

The goal of LID is to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing,

detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Practices used to adhere to these LID principles include measures such as rain barrels and cisterns, green roofs, permeable pavement, preserving undeveloped open space, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes.

Task Description

i. The Permittees shall, at a minimum, implement the following LID requirements:

(1) **Source Control Requirements**

Require all Regulated Projects to implement source control measures onsite that, at a minimum, shall include the following:

- (a) Minimization of stormwater pollutants of concern in urban runoff through measures that may include plumbing of the following discharges to the sanitary sewer, subject to the local sanitary sewer agency's regulations and standards:
 - Discharges from indoor floor mat/equipment/hood filter wash racks or covered outdoor wash racks for restaurants;
 - Dumpster drips from covered trash, food waste, and compactor enclosures;
 - Discharges from covered outdoor wash areas for vehicles, equipment, and accessories;
 - Swimming pool water, if discharge to onsite vegetated areas is not a feasible option; and
 - Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option;
- (b) Properly designed covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas;
- (c) Properly designed trash storage areas;
- (d) Landscaping that minimizes irrigation and runoff, promotes surface infiltration, minimizes the use of pesticides and fertilizers, and incorporates other appropriate sustainable landscaping practices and programs such as Bay-Friendly Landscaping;
- (e) Efficient irrigation systems; and
- (f) Storm drain system stenciling or signage.

(2) **Site Design and Stormwater Treatment Requirements**

- (a) Require each Regulated Project to implement at least the following design strategies onsite:
 - (i) Limit disturbance of natural water bodies and drainage systems; minimize compaction of highly permeable soils; protect slopes

- and channels; and minimize impacts from stormwater and urban runoff on the biological integrity of natural drainage systems and water bodies;
- (ii) Conserve natural areas, including existing trees, other vegetation, and soils;
 - (iii) Minimize impervious surfaces;
 - (iv) Minimize disturbances to natural drainages; and
 - (v) Minimize stormwater runoff by implementing one or more of the following site design measures:
 - Direct roof runoff into cisterns or rain barrels for reuse.
 - Direct roof runoff onto vegetated areas.
 - Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.
 - Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.
 - Construct sidewalks, walkways, and/or patios with pervious pavement systems.³
 - Construct driveways, bike lanes, and/or uncovered parking lots with pervious pavement systems.
- (b) Permittees shall collectively, on a regional or countywide basis, develop and adopt design specifications for pervious pavement systems, subject to the Executive Officer's approval. If countywide design specifications have been adopted and are contained in countywide stormwater handbooks, Permittees may reference these documents in the Annual Reports.
- (c) Require each Regulated Project to treat 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility.
- (i) LID treatment measures are harvesting and use, infiltration, evapotranspiration, and biotreatment.
 - (ii) Biotreatment (or bioretention) systems shall be designed to have a surface area no smaller than what is required to accommodate a 5 inches/hour stormwater runoff surface loading rate, infiltrate runoff through biotreatment soil media at a minimum of 5 inches per hour, and maximize infiltration to the native soil during the life of the Regulated Project. The soil media for biotreatment (or bioretention) systems shall be designed to sustain healthy, vigorous plant growth and maximize stormwater runoff retention

³ Pervious pavement systems include pervious asphalt, pervious concrete, pervious pavers, and grid pavers.

and pollutant removal. Permittees shall ensure that Regulated Projects use biotreatment soil media that meet the minimum specifications set forth in Attachment L of the previous permit (Order No. R2-2009-0074), dated November 28, 2011.

Permittees may collectively (on an all-Permittee scale or countywide scale) develop and adopt revisions to the soil media minimum specifications, subject to the Executive Officer's approval.

- (iii) Green roofs may be considered biotreatment systems that treat roof runoff only if they meet certain minimum specifications. Permittees shall ensure that green roofs installed at Regulated Projects meet the following minimum specifications:
 - (i) The green roof system planting media shall be sufficiently deep to provide capacity within the pore space of the media for the required runoff volume specified by Provision C.3.d.i.(1).
 - (ii) The green roof system planting media shall be sufficiently deep to support the long term health of the vegetation selected for the green roof, as specified by a landscape architect or other knowledgeable professional.
- (d) Require any Regulated Project that does not comply with Provision C.3.c.i.(2)(c) above to meet the requirements established in Provision C.3.e for alternative compliance.

ii. Reporting

- (1) Permittees shall collectively submit in the 2016 Annual Report, design specifications for pervious pavement systems that have been developed and adopted on a regional or countywide basis. If Permittees within a countywide program are using countywide design specifications that have been adopted and are contained in a countywide stormwater handbook, those Permittees may reference the countywide stormwater handbook in-lieu of submitting the actual design specifications.
- (2) For specific tasks listed above that are reported using the reporting tables required for Provision C.3.b.iv, a reference to those tables will suffice.

C.3.d. Numeric Sizing Criteria for Stormwater Treatment Systems

- i. **Task Description** – The Permittees shall require that stormwater treatment systems constructed for Regulated Projects meet at least one of the following hydraulic sizing design criteria:
 - (1) **Volume Hydraulic Design Basis** – Treatment systems whose primary mode of action depends on volume capacity shall be designed to treat stormwater runoff equal to:
 - (a) The maximized stormwater capture volume for the area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients set forth in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998), pages 175–178 (e.g., approximately the 85th percentile 24-hour storm runoff event); or
 - (b) The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology set forth in Section 5 of CASQA’s Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data.
 - (2) **Flow Hydraulic Design Basis** – Treatment systems whose primary mode of action depends on flow capacity shall be sized to treat:
 - (a) 10 percent of the 50-year peak flow rate;
 - (b) The flow of runoff produced by a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall depths; or
 - (c) The flow of runoff resulting from a rain event equal to at least 0.2 inches per hour intensity.
 - (3) **Combination Flow and Volume Design Basis** – Treatment systems that use a combination of flow and volume capacity shall be sized to treat at least 80 percent of the total runoff over the life of the project, using local rainfall data.
- ii. **Reporting** – Permittees shall use the reporting tables required in Provision C.3.b.iv.(2)
- iii. **Limitations on Use of Infiltration Devices in Stormwater Treatment Systems**
 - (1) For Regulated Projects, each Permittee shall review planned land use and proposed treatment design to verify that installed stormwater treatment systems with no under-drain, and that function primarily as infiltration devices, should not cause or contribute to the degradation of groundwater quality at project sites. An infiltration device is any structure that is designed to infiltrate stormwater into the subsurface and, as designed, bypass the natural groundwater protection afforded by surface soil.

Infiltration devices include dry wells, injection wells, and infiltration trenches (includes french drains).

- (2) For any Regulated Project that includes plans to install stormwater treatment systems which function primarily as infiltration devices, the Permittee shall require that:
 - (a) Appropriate pollution prevention and source control measures are implemented to protect groundwater at the project site, including the inclusion of a minimum of two feet of suitable soil to achieve a maximum 5 inches/hour infiltration rate for the infiltration system;
 - (b) Adequate maintenance is provided to maximize pollutant removal capabilities;
 - (c) The vertical distance from the base of any infiltration device to the seasonal high groundwater mark is at least 10 feet. (Note that some locations within the Permittees' jurisdictions are characterized by highly porous soils and/or high groundwater tables. In these areas, a greater vertical distance from the base of the infiltration device to the seasonal high groundwater mark may be appropriate, and treatment system approvals should be subject to a higher level of analysis that considers the potential for pollutants (such as from onsite chemical use), the level of pretreatment to be achieved, and other similar factors in the overall analysis of groundwater safety);
 - (d) Unless stormwater is first treated by a method other than infiltration, infiltration devices are not approved as treatment measures for runoff from areas of industrial or light industrial activity; areas subject to high vehicular traffic (i.e., 25,000 or greater average daily traffic on a main roadway or 15,000 or more average daily traffic on any intersecting roadway); automotive repair shops; car washes; fleet storage areas (e.g., bus, truck); nurseries; and other land uses that pose a high threat to water quality;
 - (e) Infiltration devices are not placed in the vicinity of known contamination sites unless it has been demonstrated that increased infiltration will not increase leaching of contaminants from soil, alter groundwater flow conditions affecting contaminant migration in groundwater, or adversely affect remedial activities; and
 - (f) Infiltration devices are located a minimum of 100 feet horizontally away from any known water supply wells, septic systems, and underground storage tanks with hazardous materials. (Note that some locations within the Permittees' jurisdictions are characterized by highly porous soils and/or high groundwater tables. In these areas, a greater horizontal distance from the infiltration device to known water supply wells, septic systems, or underground storage tanks with hazardous materials may be appropriate, and treatment system approvals should be subject to a higher level of analysis that considers the potential for pollutants (such as from onsite chemical use), the

level of pretreatment to be achieved, and other similar factors in the overall analysis of groundwater safety).

C.3.e. Alternative or In-Lieu Compliance with Provision C.3.b.

- i. The Permittees may allow a Regulated Project to provide alternative compliance with Provision C.3.b in accordance with one of the two options listed below:

(1) **Option 1: LID Treatment at an Offsite Location**

Treat a portion of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility **and** treat the remaining portion of the Provision C.3.d runoff with LID treatment measures at an offsite project in the same watershed. The offsite LID treatment measures must provide hydraulically-sized treatment (in accordance with Provision C.3.d) of an equivalent quantity of both stormwater runoff and pollutant loading and achieve a net environmental benefit.

(2) **Option 2: Payment of In-Lieu Fees**

Treat a portion of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility **and** pay equivalent in-lieu fees⁴ to treat the remaining portion of the Provision C.3.d runoff with LID treatment measures at a Regional Project.⁵ The Regional Project must achieve a net environmental benefit.

- (3) For the alternative compliance options described in Provision C.3.e.i.(1) and (2) above, offsite and Regional Projects must be completed within three years after the end of construction of the Regulated Project. However, the timeline for completion of a Regional Project may be extended, up to five years after the completion of the Regulated Project, with prior Executive Officer approval. Executive Officer approval will be granted contingent upon a demonstration of good faith efforts to implement the Regional Project, such as having funds encumbered and applying for the appropriate regulatory permits.

ii. **Special Projects**

- (1) When considered at the watershed scale, certain land development projects characterized as smart growth, high density, or transit-oriented development can either reduce existing impervious surfaces, or create less "accessory" impervious areas and automobile-related pollutant impacts.

⁴ **In-lieu fees** – Monetary amount necessary to provide both hydraulically-sized treatment (in accordance with Provision C.3.d) with LID treatment measures of an equivalent quantity of stormwater runoff and pollutant loading, and a proportional share of the operation and maintenance costs of the Regional Project.

⁵ **Regional Project** – A regional or municipal stormwater treatment facility that discharges into the same watershed as the Regulated Project.

Incentive LID Treatment Reduction Credits approved by the Water Board may be applied to these Special Projects, which are Regulated Projects that meet the specific criteria listed below in Provision C.3.e.ii.(2). For any Special Project, the allowable incentive LID Treatment Reduction Credit is the maximum percentage of the amount of runoff identified in Provision C.3.d. for the Special Project's drainage area, that may be treated with one or a combination of the following two types of non-LID treatment systems:

- Tree-box-type high flowrate biofilters
- Vault-based high flowrate media filters

The allowed LID Treatment Reduction Credit recognizes that density and space limitations for the Special Projects identified herein may make 100% LID treatment infeasible.

- (2) Prior to granting any LID Treatment Reduction Credits, Permittees must first establish all the following:
 - (a) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite;
 - (b) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures offsite or paying in-lieu fees to treat 100% of the Provision C.3.d runoff with LID treatment measures at an offsite or Regional Project; and
 - (c) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with some combination of LID treatment measures onsite, offsite, and/or paying in-lieu fees towards at an offsite or Regional Project.

For each Special Project, a Permittee shall document the basis of infeasibility used to establish technical and/or economic infeasibility.

Under Provision C.3.e.vi, each Permittee is required to report on the infeasibility of 100% LID treatment in each scenario described in Provision C.3.e.ii.(2)(a)-(c) above, for each of the Special Projects for which LID Treatment Reduction Credit was applied.

- (3) Category A Special Project Criteria
 - (a) To be considered a Category A Special Project, a Regulated Project must meet all of the following criteria:
 - (i) Be built as part of a Permittee's stated objective to preserve or enhance a pedestrian-oriented type of urban design.
 - (ii) Be located in a Permittee's designated central business district, downtown core area or downtown core zoning district, neighborhood business district or comparable pedestrian-

- oriented commercial district, or historic preservation site and/or district.
- (iii) Create and/or replace one half acre or less of impervious surface area.
 - (iv) Include no surface parking, except for incidental surface parking. Incidental surface parking is allowed only for emergency vehicle access, Americans with Disabilities Act (ADA) accessibility, and passenger and freight loading zones.
 - (v) Have at least 85% coverage for the entire project site by permanent structures. The remaining 15% portion of the site is to be used for safety access, parking structure entrances, trash and recycling service, utility access, pedestrian connections, public uses, landscaping, and stormwater treatment.
- (b) Any Category A Special Project may qualify for 100% LID Treatment Reduction Credit, which would allow the Category A Special Project to treat up to 100% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- (4) Category B Special Project Criteria
- (a) To be considered a Category B Special Project, a Regulated Project must meet all of the following criteria:
 - (i) Be built as part of a Permittee's stated objective to preserve or enhance a pedestrian-oriented type of urban design.
 - (ii) Be located in a Permittee's designated central business district, downtown core area or downtown core zoning district, neighborhood business district or comparable pedestrian-oriented commercial district, or historic preservation site and/or district.
 - (iii) Create and/or replace greater than one-half acre but no more than 2 acres of impervious surface area.
 - (iv) Include no surface parking, except for incidental surface parking. Incidental surface parking is allowed only for emergency vehicle access, ADA accessibility, and passenger and freight loading zones.
 - (v) Have at least 85% coverage for the entire project site by permanent structures. The remaining 15% portion of the site is to be used for safety access, parking structure entrances, trash and recycling service, utility access, pedestrian connections, public uses, landscaping, and stormwater treatment.
 - (b) For any Category B Special Project, the maximum LID Treatment Reduction Credit allowed is determined based on the density achieved by the Project in accordance with the criteria listed below. Density is

expressed in Floor Area Ratios (FARs⁶) for commercial development projects, in Dwelling Units per Acre (DU/Ac) for residential development projects, and in FARs and DU/Ac for mixed-use development projects.

(i) 50% Maximum LID Treatment Reduction Credit

- For any commercial Category B Special Project with an FAR of at least 2:1, up to 50% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- For any residential Category B Special Project with a gross density⁷ of at least 50 DU/Ac, up to 50% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- For any mixed use Category B Special Project with an FAR of at least 2:1 or a gross density of at least 50 DU/Ac, up to 50% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.

(ii) 75% Maximum LID Treatment Reduction Credit

- For any commercial Category B Special Project with an FAR of at least 3:1, up to 75% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- For any residential Category B Special Project with a gross density of at least 75 DU/Ac, up to 75% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- For any mixed use Category B Special Project with an FAR of at least 3:1 or a gross density of at least 75 DU/Ac, up to 75% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.

(iii) 100% Maximum LID Treatment Reduction Credit

⁶ **Floor Area Ratio** – The ratio of the total floor area on all floors of all buildings at a project site (except structures, floors, or floor areas dedicated to parking) to the total project site area.

⁷ **Gross Density** – The total number of residential units divided by the acreage of the entire site area, including land occupied by public right-of-ways, recreational, civic, commercial and other non-residential uses.

- For any commercial Category B Special Project with an FAR of at least 4:1, up to 100% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
 - For any residential Category B Special Project with a gross density of at least 100 DU/Ac, up to 100% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
 - For any mixed use Category B Special Project with an FAR of at least 4:1 or a gross density of at least 100 DU/Ac, up to 100% of the amount of runoff identified in Provision C.3.d. for the Project's drainage area may be treated with either one or a combination of the two types of non-LID treatment systems listed in Provision C.3.e.ii.(1) above.
- (5) Category C Special Project Criteria (Transit-Oriented Development)
- (a) Transit-Oriented Development refers to the clustering of homes, jobs, shops and services in close proximity to rail stations, ferry terminals or bus stops offering access to frequent, high-quality transit services. This pattern typically involves compact development and a mixing of different land uses, along with amenities like pedestrian-friendly streets. To be considered a Category C Special Project, a Regulated Project must meet all of the following criteria:
- (i) Be characterized as a non-auto-related land use project. That is, Category C specifically excludes any Regulated Project that is a stand-alone surface parking lot; car dealership; auto and truck rental facility with onsite surface storage; fast-food restaurant, bank or pharmacy with drive-through lanes; gas station, car wash, auto repair and service facility; or other auto-related project unrelated to the concept of Transit-Oriented Development.
 - (ii) If a commercial development project, achieve at least an FAR of 2:1.
 - (iii) If a residential development project, achieve at least a gross density of 25 DU/Ac.
 - (iv) If a mixed use development project, achieve at least an FAR of 2:1 or a gross density of 25 DU/Ac.
- (b) For any Category C Special Project, the total maximum LID Treatment Reduction Credit allowed is the sum of three different types of credits that the Category C Special Project may qualify for, namely: Location, Density and Minimized Surface Parking Credits.

- (c) Location Credits
- (i) A Category C Special Project may qualify for the following Location Credits:
 - a. 50% Location Credit: Located within a ¼ mile radius of an existing or planned transit hub.
 - b. 25% Location Credit: Located within a ½ mile radius of an existing or planned transit hub.
 - c. 25% Location Credit: Located within a planned Priority Development Area (PDA), which is an infill development area formally designated by the Association of Bay Area Government's / Metropolitan Transportation Commission's FOCUS regional planning program. FOCUS is a regional incentive-based development and conservation strategy for the San Francisco Bay Area.
 - (ii) Only one Location Credit may be used by an individual Category C Special Project, even if the project qualifies for multiple Location Credits.
 - (iii) At least 50% or more of a Category C Special Project's site must be located within the ¼ or ½ mile radius of an existing or planned transit hub to qualify for the corresponding Location Credits listed above. One hundred percent of a Category C Special Project's site must be located within a PDA to qualify for the corresponding Location Credit listed above.
 - (iv) Transit hub is defined as a rail, light rail, or commuter rail station, ferry terminal, or bus transfer station served by three or more bus routes (i.e., a bus stop with no supporting services does not qualify). A planned transit hub is a station on the MTC's Regional Transit Expansion Program list, per MTC's Resolution 3434 (revised April 2006), which is a regional priority funding plan for future transit stations in the San Francisco Bay Area.
- (d) Density Credits: To qualify for any Density Credits, a Category C Special Project must first qualify for one of the Location Credits listed in Provision C.3.e.ii.(5)(c) above.
- (i) A Category C Special Project that is a commercial or mixed-use development project may qualify for the following Density Credits:
 - a. 10% Density Credit: Achieve an FAR of at least 2:1.
 - b. 20% Density Credit: Achieve an FAR of at least 4:1.
 - c. 30% Density Credit: Achieve an FAR of at least 6:1.
 - (ii) A Category C Special Project that is a residential or mixed-use development project may qualify for the following Density Credits:

- a. 10% Density Credit: Achieve a gross density of at least 30 DU/Ac.
 - b. 20% Density Credit: Achieve a gross density of at least 60 DU/Ac.
 - c. 30% Density Credit: Achieve a gross density of at least 100 DU/Ac.
- (iii) Commercial Category C Projects do not qualify for Density Credits based on DU/Ac and residential Category C Projects do not qualify for Density Credits based on FAR. Mixed use Category C Projects may use Density Credits based on either DU/Ac or FAR, but not both.
- (iv) Only one Density Credit may be used by an individual Category C Special Project, even if the project qualifies for multiple Density Credits.
- (e) Minimized Surface Parking Credits: To qualify for any Minimized Surface Parking Credits, a Category C Special Project must first qualify for one of the Location Credits listed in Provision C.3.e.ii.(5)(c) above.
- (i) A Category C Special Project may qualify for the following Minimized Surface Parking Credits:
 - a. 10% Minimized Surface Parking Credit: Have 10% or less of the total post-project impervious surface area dedicated to at-grade surface parking. The at-grade surface parking must be treated with LID treatment measures.
 - b. 20% Minimized Surface Parking Credit: Have no surface parking except for incidental surface parking. Incidental surface parking is allowed only for emergency vehicle access, ADA accessibility, and passenger and freight loading zones.
 - (ii) Only one Minimized Surface Parking Credit may be used by an individual Category C Special Project, even if the project qualifies for multiple Minimized Surface Parking Credits.
- (6) Any Regulated Project that meets all the criteria for multiple Special Projects Categories (i.e., a Regulated Project that may be characterized as a Category B or C Special Project) may only use the LID Treatment Reduction Credit allowed under one of the Special Projects Categories (i.e., a Regulated Project that may be characterized as a Category B or C Special Project may use the LID Treatment Reduction Credit allowed under Category B or Category C, but not the sum of both.).

iii. Implementation Level

- (1) Provisions C.3.e.i-ii supersede any Alternative Compliance Policies previously approved by the Executive Officer.

- (2) The definitions of FAR and gross density applicable to Provisions C.3.e.ii.(4) and (5) are effective July 1, 2016, and shall apply to all Special Projects granted final discretionary approval on or after July 1, 2016.
- (3) For all offsite projects and Regional Projects installed in accordance with Provision C.3.e.i-ii, the Permittees shall meet the Operation & Maintenance (O&M) requirements of Provision C.3.h.

iv. Reporting – Annual reporting shall be done in conjunction with reporting requirements under Provision C.3.b.iv.(2).

Any Permittee choosing to require 100% LID treatment onsite for all Regulated Projects and not allow alternative compliance under Provision C.3.e, shall include a statement to that effect in each Annual Report.

v. Reporting on Special Projects

- (1) Permittees shall track any identified potential Special Projects, including those projects that have submitted planning applications but that have not received final discretionary approval.
- (2) In each Annual Report, Permittees shall report to the Water Board on these tracked potential Special Projects using Table 3.1 found at the end of Provision C.3. All the required column entry information listed in Table 3.1 shall be reported for each potential Special Project. Any Permittee with no Special Projects shall so state.

For each Special Project listed in Table 3.1, Permittees shall include a narrative discussion of the feasibility or infeasibility of 100% LID treatment onsite, offsite, and at a Regional Project. The narrative discussion shall address each of the following:

- (a) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures onsite.
- (b) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with LID treatment measures offsite or paying in-lieu fees to treat 100% of the Provision C.3.d runoff with LID treatment measures at a Regional Project.
- (c) The infeasibility of treating 100% of the amount of runoff identified in Provision C.3.d for the Regulated Project's drainage area with some combination of LID treatment measures onsite, offsite, and/or paying in-lieu fees towards a Regional Project.

Both technical and economic feasibility or infeasibility shall be discussed, as applicable. The discussion shall also contain enough technical and/or economic detail to document the basis of infeasibility used.

- (3) Once a Special Project has final discretionary approval, it shall be reported in the Provision C.3.b. Reporting Table in the same reporting year that the project was approved. In addition to the column entries contained in the

Provision C.3.b. Reporting Table, the Permittees shall provide the following supplemental information for each approved Special Project:

- (a) Submittal Date: Date that a planning application for the Special Project was submitted.
- (b) Description: Type of project, number of floors, number of units (commercial, mixed-use, residential), type of parking, and other relevant information.
- (c) Site Acreage: Total site area in acres.
- (d) Gross Density in DU/Ac: Number of dwelling units per acre.
- (e) Density in FAR: Floor Area Ratio.
- (f) Special Project Category: For each applicable Special Project Category, list the specific criteria applied to determine applicability. For each non-applicable Special Project Category, indicate n/a.
- (g) LID Treatment Reduction Credit: For each applicable Special Project Category, state the maximum total LID Treatment Reduction Credit applied. For Category C Special Projects also list the individual Location, Density, and Minimized Surface Parking Credits applied.
- (h) Stormwater Treatment Systems: List all proposed stormwater treatment systems and the corresponding percentage of the total amount of runoff identified in Provision C.3.d. for the Project's drainage area that will be treated by each treatment system.
- (i) List of Non-LID Stormwater Treatment Systems: List all non-LID stormwater treatment systems approved. For each type of non-LID treatment system, indicate: (1) the percentage of the total amount of runoff identified in Provision C.3.d. for the Special Project's drainage area, and (2) whether the treatment system either meets minimum design criteria published by a government agency or received certification issued by a government agency, and reference the applicable criteria or certification.

C.3.f. Alternative Certification of Stormwater Treatment Systems

- i. Task Description** – In lieu of reviewing a Regulated Project's adherence to Provision C.3.d, a Permittee may elect to have a third party conduct detailed review and certify the Regulated Project's adherence to Provision C.3.d. The third party reviewer must be a Civil Engineer or a Licensed Architect or Landscape Architect registered in the State of California or staff of another Permittee subject to the requirements of this Permit.
- ii. Implementation Level** – Any Permittee accepting third-party reviews must make a reasonable effort to ensure that the third party has no conflict of interest with regard to the Regulated Project in question. That is, any consultant or contractor (or his/her employees) hired to design and/or construct a stormwater treatment system for a Regulated Project shall not also be the certifying third party. The Permittee must verify that the third party certifying any Regulated Project has current training on stormwater treatment system design (within three

years of the certification signature date) for water quality and understands the groundwater protection principles applicable to Regulated Project sites.

Training conducted by an organization with stormwater treatment system design expertise (such as a college or university, the American Society of Civil Engineers, American Society of Landscape Architects, American Public Works Association, California Water Environment Association (CWEA), BASMAA, National Association of Flood & Stormwater Management Agencies, CASQA, or the equivalent, may be considered qualifying training.

- iii. **Reporting** – Projects reviewed by third parties shall be noted in reporting tables for Provision C.3.b.

C.3.g. Hydromodification Management

- i. **Hydromodification Management (HM) Projects** are Regulated Projects that create and/or replace one acre or more of impervious surface except where one of the following applies. All HM Projects shall meet the Hydromodification Management Standard of Provision C.3.g.ii.
 - (1) The post-project impervious surface area is less than, or the same as, the pre-project impervious surface area.
 - (2) The project is located in a catchment that drains to a hardened (e.g., continuously lined with concrete) engineered channel or channels or enclosed pipes that extend continuously to the Bay, Delta, or flow-controlled reservoir, or drains to channels that are tidally influenced.
 - (3) The project is located in a catchment or subwatershed that is highly developed (i.e., that is 70% or more impervious).⁸

The Hydromodification Applicability Maps developed by the Permittees in the Alameda, Santa Clara, San Mateo, and Fairfield-Suisun Programs, and the City of Vallejo, under the Previous Permit remain in effect and are provided in Attachment C to this Permit. Permittees that do not have the location-based applicability criteria (Provision C.3.g.i.(2) – (3)) shown on existing maps shall develop, or require to be developed, new maps, overlays to existing maps, or other equivalent information that demonstrates whether a project falls under one of those two criteria. Such maps, overlays, or other equivalent information shall be acceptable to the Executive Officer and shall not be effective until accepted by the Executive Officer.

- ii. **HM Standard**

Stormwater discharges from HM Projects shall not cause an increase in the erosion potential of the receiving stream over the pre-project (existing) condition. Increases in runoff flow and volume shall be managed so that post-

⁸ The Permittees' maps accepted for the Previous Permit were prepared using this standard, adjusted to 65% imperviousness to account for the presence of vegetation on the photographic references used to determine imperviousness. Thus, the maps for the Previous Permit are accepted as meeting the 70% requirement.

project runoff shall not exceed estimated pre-project rates and durations, where such increased flow and/or volume is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force. The demonstration that post-project stormwater runoff does not exceed estimated pre-project runoff rates and durations shall include the following:

- (1) **Range of Flows to Control:** For Alameda, Contra Costa, San Mateo, and Santa Clara Permittees, and the City of Vallejo, HM controls shall be designed such that post-project stormwater discharge rates and durations match pre-project discharge rates and durations from 10 percent of the pre-project 2-year peak flow⁹ up to the pre-project 10-year peak flow. For Fairfield-Suisun Permittees, HM controls shall be designed such that post-project stormwater discharge rates and durations shall match from 20 percent of the 2-year peak flow up to the pre-project 10-year peak flow.
- (2) **Goodness of Fit Criteria:** The post-project flow duration curve shall not deviate above the pre-project flow duration curve by more than 10 percent over more than 10 percent of the length of the curve corresponding to the range of flows to control.
- (3) **Standard HM Modeling:** Permittees shall use, or shall cause to be used, a continuous simulation hydrologic computer model to simulate pre-project and post-project runoff, or sizing factors or charts developed using such a model, to design onsite or regional HM controls. The Permittees shall compare, or shall cause to be compared, the pre-project and post-project model output for a long-term rainfall record and shall show that applicable performance criteria in C.3.g.ii.(1)-(3) above are met. HM controls designed using the Bay Area Hydrology Model (BAHM) and site-specific input data shall be considered to meet the HM Standard. Such use must be consistent with directions and options set forth in the most current BAHM User Manual. Modifications to the BAHM shall be acceptable to the Executive Officer, shall be consistent with the requirements of this Provision, and shall be reported as required below:
 - **Precipitation Data:** Precipitation data used in the modeling of HM controls shall, at a minimum, be 30 years of hourly rainfall data representative of the area being modeled. Where a longer rainfall record is available, the longer record shall be used.
 - **Calculating Post-Project Runoff:** Retention and detention basins shall be considered impervious surfaces for purposes of calculating

⁹ Where referred to in this Order, the 2-year peak flow is determined using a flood frequency analysis based on USGS Bulletin 17 B to obtain the peak flow statistically expected to occur at a 2-year recurrence interval. In this analysis, the appropriate record of hourly rainfall data (e.g., 35-50 years of data) is run through a continuous simulation hydrologic model, the annual peak flows are identified, rank ordered, and the 2-year peak flow is estimated. Such models include U.S. EPA's Hydrologic Simulation Program—Fortran (HSPF), the U.S. Army Corps of Engineers' Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS), and U.S. EPA's Storm Water Management Model (SWMM).

post-project runoff. Pre- and post-project runoff shall be calculated and compared for the entire site, without separating or excluding areas that may be considered self-retaining.

iii. HM Standard – Methodology for Direct Simulation of Erosion Potential

The Permittees may, collectively, propose an additional method, using direct simulation of erosion potential, by which to meet the HM Standard in Provision C.3.g.ii. Such a method shall be submitted to the Water Board for review and shall not be effective until approved by the Executive Officer. At a minimum, a proposal to use this additional method shall demonstrate that stormwater discharges from HM Projects using the method will not cause an increase in the erosion potential of the receiving stream over the pre-project (existing) condition, and that increases in runoff flow and volume will be managed so that post-project runoff does not exceed estimated pre-project rates and durations, where such increased flow and/or volume is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force. Such demonstration shall include, but not be limited to:

- (1) An appropriately detailed discussion of the theoretical approach behind the method and the results for the areas to which it is proposed to be applied;
- (2) Appropriate continuous simulation hydrologic modeling using Region-specific field data, including creek data (cross sections, longitudinal data, etc.), precipitation data (a record of at least 30 years of hourly data that is appropriately representative of the areas where the method is to be applied), safety factor(s), and HM control designs; and
- (3) A description of how the method will be applied, including any models produced and how they will be used by the Permittees and/or project proponents. Such description shall include a listing of HM controls that may be used to comply with the HM requirements of this Permit, a description, with appropriate technical support, of how they will be sized to comply and how the Permittees will ensure appropriate implementation of the method, and all other necessary information, as appropriate.

iv. Types of HM Controls

Projects shall meet the HM Standard using any of the following HM controls or a combination thereof:

- (1) **Onsite HM controls** are flow duration control structures, LID features and facilities, and hydrologic source controls that collectively result in the HM Standard being met at the point(s) where stormwater runoff discharges from the project site.
- (2) **Regional HM controls** are flow duration control structures that collect stormwater runoff discharge from multiple projects (each of which shall incorporate hydrologic source control measures as well) and are designed

such that the HM Standard is met for all the projects at the point where the regional HM control discharges.

- (3) **In-stream measures** shall be an option only where the stream, which receives runoff from the project, is already impacted by erosive flows and shows evidence of excessive sediment, erosion, deposition, or is a hardened channel.

In-stream measures involve modifying the receiving stream channel slope and geometry so that the stream can convey the new flow regime without increasing the potential for erosion and aggradation. In-stream measures are intended to improve long-term channel stability and prevent erosion by reducing the erosive forces imposed on the channel boundary.

In-stream measures, or a combination of in-stream and onsite controls, shall be designed to achieve the HM Standard from the point where the project(s) discharge(s) to the stream to the mouth of the stream or to achieve an equivalent degree of flow control mitigation (based on amount of impervious surface mitigated) as part of an in-stream project located in the same watershed. Designing in-stream controls requires a hydrologic and geomorphic evaluation (including a longitudinal profile) of the stream system downstream and upstream of the project. As with all in-stream activities, other regulatory permits must be obtained by the project proponent.¹⁰

v. Implementation Level

All HM Projects shall meet the HM Standard in Provision C.3.g.ii immediately. For Contra Costa Permittees, Projects receiving final planning entitlements on or before January 3, 2018, may be allowed to use the Contra Costa design standards from the Previous Permit. After January 3, 2018, for Contra Costa Permittees, Projects shall comply with the Contra Costa design standards, including any modifications made.

vi. Reporting

- (1) New HM Applicability Maps or equivalent information prepared pursuant to Provision C.3.g.i, for those Permittees who do not have an approved Map, shall be submitted, acceptable to the Executive Officer, not later than the second Annual Report following the Permit's effective date.
- (2) Contra Costa Permittees shall, with the 2017 Annual Report, submit a technical report, acceptable to the Executive Officer, consisting of an HM Management Plan describing how Contra Costa will implement the Permit's HM requirements (e.g., how it will update or modify its practices to meet Permit requirements). At a minimum, the technical report shall

¹⁰ In-stream control projects require a Stream Alteration Agreement from CDFW, a CWA section 404 permit from the U.S. Army Corps of Engineers, and a section 401 certification from the Water Board. Early discussions with these agencies on the acceptability of an in-stream modification are necessary to avoid project delays or redesign.

provide additional analysis and discussion as to how existing data appropriately evaluates how existing practices available for use meet the Permit's HM requirements, including limit conditions. The report shall, as necessary, propose modifications to Contra Costa's current HM practices, or propose alternate practices that have been accepted by the Water Board, to meet the Permit's HM requirements. The report may also: provide additional data on monitored installations; provide additional analysis and discussion as to how existing and additional data appropriately evaluates existing practices, including limit conditions and the range of conditions present across Contra Costa County; and provide other information or discussion, as appropriate.

- (3) Reporting of HM projects shall be as described in Provision C.3.b.
- (4) Permittees shall report collectively, with each Annual Report, a listing, summary, and date of modifications made to the BAHM, including the technical rationale. This shall be prepared at the countywide program level and submitted on behalf of participating Permittees.
- (5) In addition, for each HM Project approved during the reporting period, Permittees shall collect and make available the following information. Information shall be reported electronically, and, where appropriate, in tabular form.
 - Device(s) or method(s) used to meet the HM Standard, such as detention basin(s), bioretention unit(s), regional detention basin, or in-stream control(s);
 - Method used by the project proponent to design and size the device or method used to meet the HM Standard;
 - Site plans identifying impervious areas, surface flow directions for the entire site, and location(s) of HM measures;
 - For projects using standard sizing charts, a summary of sizing calculations used;
 - For projects using the BAHM, a listing of model inputs; and
 - For projects using custom modeling, a summary of the modeling calculations with a corresponding graph showing curve matching (existing, post-project, and post-project-with HM controls curves).

C.3.h. Operation and Maintenance of Stormwater Treatment Systems

- i. Task Description** – Each Permittee shall implement an Operation and Maintenance (O&M) Verification Program.
- ii. Implementation Level** – At a minimum, the O&M Verification Program shall include the following elements:

- (1) Conditions of approval or other legally enforceable agreements or mechanisms for all Regulated Projects that, at a minimum, require at least one of the following from all project proponents and their successors in control of the Project or successors in fee title:
 - (a) The project proponent's signed statement accepting responsibility for the O&M of the installed pervious pavement system(s) (if any), onsite, joint, and/or offsite stormwater treatment system(s), and HM control(s) (if any) until such responsibility is legally transferred to another entity;
 - (b) Written conditions in the sales or lease agreements or deed for the project that requires the buyer or lessee to assume responsibility for the O&M of the pervious pavement system(s) (if any), onsite, joint, and/or offsite installed stormwater treatment system(s), and HM control(s) (if any) until such responsibility is legally transferred to another entity;
 - (c) Written text in project deeds, or conditions, covenants and restrictions (CCRs) for multi-unit residential projects that require the homeowners association or, if there is no association, each individual owner to assume responsibility for the O&M of the installed pervious pavement system(s) (if any), onsite, joint, and/or offsite stormwater treatment system(s), and HM control(s) (if any) until such responsibility is legally transferred to another entity; or
 - (d) Any other legally enforceable agreement or mechanism, such as recordation in the property deed, that assigns the O&M responsibility for the installed pervious pavement system(s) (if any), onsite, joint, and/or offsite treatment system(s) and HM control(s) (if any) to the project owner(s) or the Permittee.
- (2) Coordination with the appropriate mosquito and vector control agency with jurisdiction to establish a protocol for notification of installed stormwater treatment systems and HM controls.
- (3) Conditions of approval or other legally enforceable agreements or mechanisms for all Regulated Projects that require the granting of site access to all representatives of the Permittee, local mosquito and vector control agency staff, and Water Board staff, for the sole purpose of performing O&M inspections of the installed pervious pavement system(s) (if any), stormwater treatment system(s) and HM control(s) (if any).
- (4) A database or equivalent tabular format of the following:
 - (a) All pervious pavement system(s) that total 3000 square feet or more installed at Regulated Projects, offsite, or at a Regional Project. The total square footage should not include pervious pavement systems installed as private-use patios for single family homes, townhomes, or condominiums.
 - (b) All stormwater treatment systems installed onsite at Regulated Projects, offsite, or at a joint or Regional Project.

- (c) All HM controls installed onsite at Regulated Projects, offsite, or at a joint or Regional Project.
- (5) The database or equivalent tabular format required in Provision C.3.h.ii.(4) shall include the following information for each Regulated Project, offsite project, and Regional Project:
- (a) Name and address of the project;
 - (b) Names of the owner(s) and responsible operator(s) of the installed pervious pavement system(s) (if any), stormwater treatment system(s), and/or HM control(s);
 - (c) Specific description of the location (or a map showing the location) of the installed pervious pavement system(s) (if any), stormwater treatment system(s), and HM control(s) (if any);
 - (d) Date(s) that the pervious pavement system(s) (if any), stormwater treatment system(s), and HM controls (if any) was/were installed;
 - (e) Description of the type and size of the pervious pavement systems (if any), stormwater treatment system(s), and HM control(s) (if any) installed;
 - (f) Detailed information on O&M inspections. For each inspection, include the following:
 - (i) Date of inspection.
 - (ii) Type of inspection (e.g., installation, annual, followup, spot).
 - (iii) Type(s) of pervious pavement systems inspected (e.g., pervious concrete, pervious asphalt, pervious pavers).
 - (iv) Type(s) of stormwater treatment systems inspected (e.g., swale, bioretention unit, tree well) and an indication of whether the treatment system is an onsite, joint, or offsite system.
 - (v) Type of HM controls inspected.
 - (vi) Inspection findings or results (e.g., proper installation, proper operation and maintenance, system not operating properly because of plugging, bypass of stormwater because of improper installation or maintenance, maintenance required immediately).
 - (vii) Enforcement action(s) taken, if any (e.g., verbal warning, notice of violation, compliance schedule, administrative citation, administrative order).
- (6) A prioritized O&M Inspection Plan for inspecting all pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems and HM controls installed at Regulated Projects, offsite locations, and/or at joint or Regional Projects. For residential subdivisions with pervious pavement systems that include individual driveways, inspection of a representative number of driveways is sufficient.

At a minimum, the O&M Inspection Plan must specify the following for each fiscal year:

- (a) Inspection by the Permittee of all newly installed pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems, and HM controls (at Regulated Projects, offsite locations, and/or at joint or Regional Projects) at the completion of installation to ensure approved plans have been followed. For residential subdivisions with pervious pavement systems that include individual driveways, inspection of a representative number of driveways is sufficient;
- (b) Inspection by the Permittee of an average of 20 percent, but no less than 15 percent, of the total number (at the end of the preceding fiscal year) of Regulated Projects, offsite projects, or Regional Projects. Each inspection shall include inspection of all pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems, and HM controls installed at the Regulated Project, offsite project, or Regional Project. For residential subdivisions with pervious pavement systems that include individual driveways, inspection of a representative number of driveways is sufficient;
- (c) Inspection by the Permittee of all Regulated Projects, offsite projects, or Regional Projects at least once every five years. Each inspection shall include inspection of all pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems, and HM controls installed at the Regulated Project, offsite project, or Regional Project. For residential subdivisions with pervious pavement systems that include individual driveways, inspection of a representative number of driveways is sufficient; and
- (d) For vault-based stormwater treatment systems, Permittees may accept 3rd party inspection reports in lieu of conducting Permittee O&M inspections only if the 3rd party inspections are conducted at least annually. Information from each 3rd party inspection shall be included in the database or tabular format required in Provision C.3.h.ii.(5) and each inspection shall be clearly identified as a 3rd party inspection.

Each 3rd party inspection report must clearly document the following:

- (i) Name of 3rd party inspection company.
- (ii) Date of inspection.
- (iii) Condition of the treatment unit(s) at the time of inspection.
- (iv) Description of maintenance activities performed during the inspection.

- (v) Date- and time-stamped photographs of the inside of the vault unit(s) before and after maintenance activities.
- (7) An Enforcement Response Plan (ERP) for all O&M inspections that serves as a reference document for inspection staff so that consistent enforcement actions can be taken to bring development projects into compliance. At a minimum, the ERP must contain the following:
- (a) Enforcement Procedures – A description of the Permittee’s procedures from the discovery of problems through the confirmation of implementation of corrective actions. This shall include guidance for recognizing common problems with the different types of pervious pavement systems, stormwater treatment systems, and/or HM controls, remedies for the problems, and appropriate enforcement actions, followup inspections, and appropriate time periods for implementation of corrective actions, and the roles and responsibilities of staff responsible for implementing the ERP.
 - (b) Enforcement Tools and Field Scenarios – A discussion of the various, escalating enforcement tools appropriate for different field scenarios of problems identified with the pervious pavement systems, stormwater treatment systems, and/or HM controls as well as for different types of inadequate response to enforcement actions taken.
 - (c) Timely Correction of Identified Problems – A description of the Permittee’s procedures for assigning due dates for corrective actions. Permittees shall require timely correction of all identified problems with the pervious pavement systems, stormwater treatment systems, and/or HM controls.

Corrective actions shall be implemented no longer than 30 days after a problem is identified by an inspector. Corrective actions can be temporary and more time may be allowed for permanent corrective actions. If more than 30 days are required for compliance, a rationale shall be recorded in the electronic database or equivalent tabular system.

iii. Due Date for Implementation: Immediate, except as follows:

- (1) July 1, 2016, for Provision C.3.h.ii.(6) and all requirements pertaining to pervious pavement systems in Provisions C.3.h.ii.(1)-(5), C.3.h.iv., and C.3.h.v.
- (2) July 1, 2017, for Provision C.3.h.ii.(7).

iv. Maintenance Approvals: The Permittees shall ensure that all pervious pavement systems that total 3,000 square feet or more (excluding private-use patios for single family homes, townhomes, or condominiums), stormwater treatment systems, and HM controls installed onsite, offsite, or at a joint or Regional Project by development proponents are properly operated and maintained for the life of the projects. In cases where the responsible party for a pervious pavement system, stormwater treatment system or HM control has

worked diligently and in good faith with the appropriate State and federal agencies to obtain approvals necessary to complete maintenance activities, but these approvals are not granted, the Permittees shall be deemed to be in compliance with this Provision. Permittees shall ensure that constructed wetlands installed by Regulated Projects and used for urban runoff treatment shall abide by the Water Board's Resolution No. 94-102: Policy on the Use of Constructed Wetlands for Urban Runoff Pollution Control and the O&M requirements contained therein.

v. Reporting

- (1) The database or equivalent tabular format required in Provisions C.3.b.ii.(4) and (5) shall be maintained by the Permittees. Upon request from the Executive Officer, information from this database or equivalent tabular format shall be submitted to Water Board staff for review. The requested information may include specific details on each inspection conducted within particular timeframes, such as several fiscal years.
- (2) On an annual basis, before the wet season, provide a list of newly installed (installed within the reporting period) stormwater treatment systems and HM controls to the local mosquito and vector control agency and the Water Board. This list shall include the facility locations and a description of the stormwater treatment measures and HM controls installed.
- (3) Each Permittee shall report the following information in the Annual Report each year:
 - (a) Total number of Regulated Projects in the Permittee's database or tabular format as of the end of the reporting period (fiscal year).
 - (b) Total number of Regulated Projects, offsite projects, and Regional Projects inspected during the reporting period (fiscal year).
 - (c) Percentage of the total number of Regulated Projects that were inspected during the reporting period (fiscal year).
 - (d) A discussion of the inspection findings for the year and any common problems encountered with various types of pervious pavement systems, treatment systems and/or HM controls. This discussion should include a general comparison to the inspection findings from the previous year.
 - (e) A discussion of the effectiveness of the Permittee's O&M Program and any proposed changes to improve the O&M Program (e.g., changes in prioritization plan or frequency of O&M inspections, other changes to improve effectiveness of program).
 - (f) For the 2016 Annual Report, Permittees may report on the total number and percentage of treatment and HM controls inspected, and exclude discussion of inspection findings for pervious pavement systems.
- (4) Each Permittee shall certify in the 2017 Annual Report that an Enforcement Response Plan has been completed by July 1, 2017.

C.3.i. Required Site Design Measures for Small Projects and Detached Single-Family Home Projects

- i. Task Description** – The Permittees shall require all development projects, which create and/or replace $\geq 2,500 \text{ ft}^2$ to $< 10,000 \text{ ft}^2$ of impervious surface, and detached single-family home projects,¹¹ which create and/or replace 2,500 square feet or more of impervious surface, to install one or more of the following site design measures:
- Direct roof runoff into cisterns or rain barrels for reuse.
 - Direct roof runoff onto vegetated areas.
 - Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas.
 - Direct runoff from driveways and/or uncovered parking lots onto vegetated areas.
 - Construct sidewalks, walkways, and/or patios with permeable surfaces.²
 - Construct bike lanes, driveways, and/or uncovered parking lots with permeable surfaces.²

This provision applies to all development projects that require approvals and/or permits issued under the Permittees' planning, building, or other comparable authority.

- ii. Reporting** – On an annual basis, discuss the implementation of the requirements of Provision C.3.i, including ordinance revisions, permit conditions, development of standard specifications and/or guidance materials, and staff training.

C.3.j. Green Infrastructure Planning and Implementation

The Permittees shall complete and implement a Green Infrastructure Plan for the inclusion of low impact development drainage design into storm drain infrastructure on public and private lands, including streets, roads, storm drains, parking lots, building roofs, and other storm drain infrastructure elements.

The Plan is intended to serve as an implementation guide and reporting tool during this and subsequent Permit terms to provide reasonable assurance that urban runoff TMDL wasteload allocations (e.g., for the San Francisco Bay mercury and PCBs TMDLs) will be met, and to set goals for reducing, over the long term, the adverse water quality impacts of urbanization and urban runoff on receiving waters. For this Permit term, the Plan is being required, in part, as an alternative to expanding the definition of Regulated Projects prescribed in Provision C.3.b to include all new and redevelopment projects that create or replace 5,000 square feet or more of impervious surface areas and road projects that just replace existing impervious surface area. It also provides a mechanism to establish and implement alternative or

¹¹ **Detached single-family home project** – The building of one single new house or the addition and/or replacement of impervious surface to one single existing house, which is not part of a larger plan of development.

in-lieu compliance options for Regulated Projects and to account for and justify Special Projects in accordance with Provision C.3.e.

Over the long term, the Plan is intended to describe how the Permittees will shift their impervious surfaces and storm drain infrastructure from gray, or traditional storm drain infrastructure where runoff flows directly into the storm drain and then the receiving water, to green—that is, to a more-resilient, sustainable system that slows runoff by dispersing it to vegetated areas, harvests and uses runoff, promotes infiltration and evapotranspiration, and uses bioretention and other green infrastructure practices to clean stormwater runoff.

The Plan shall also identify means and methods to prioritize particular areas and projects within each Permittee’s jurisdiction, at appropriate geographic and time scales, for implementation of green infrastructure projects. Further, it shall include means and methods to track the area within each Permittee’s jurisdiction that is treated by green infrastructure controls and the amount of directly connected impervious area. As appropriate, it shall incorporate plans required elsewhere within this Permit, and specifically plans required for the monitoring of and to ensure appropriate reductions in trash, PCBs, mercury, and other pollutants.

The Permittees may comply with any requirement of this Provision through a collaborative effort.

i. Green Infrastructure Program Plan Development

Each Permittee shall:

- (1) Prepare a framework or workplan that describes specific tasks and timeframes for development of its Green Infrastructure Plan. This framework or workplan shall be approved by the Permittee’s governing body, mayor, city manager, or county manager by June 30, 2017. At a minimum, the framework or workplan shall include a statement of purpose, tasks, and timeframes to complete the elements listed in Provision C.3.j.i.(2) below.
- (2) Prepare a Green Infrastructure Plan, subject to Executive Officer approval, that contains the following elements:
 - (a) A mechanism (e.g., SFEI’s GreenPlanIT tool or another tool) to prioritize and map areas for potential and planned projects, both public and private, on a drainage-area-specific basis, for implementation over the following time schedules, which are consistent with the timeframes for assessing load reductions specified in Provisions C.11. and C.12:
 - (i) By 2020;
 - (ii) By 2030; and
 - (iii) By 2040.

The mechanism shall include criteria for prioritization (e.g., specific logistical constraints, water quality drivers (e.g., TMDLs), opportunities to treat runoff from private parcels in retrofitted street

right-of-way) and outputs (e.g., maps, project lists) that can be incorporated into the Permittee's long-term planning and capital improvement processes.

- (b) Outputs from the mechanism described above, including, but not limited to, the prioritization criteria, maps, lists, and all other information, as appropriate. Individual project-specific reviews completed using these mechanisms are not required to be submitted with the Plan, but shall be made available upon request.
- (c) Targets for the amount of impervious surface, from public and private projects, within the Permittee's jurisdiction to be retrofitted over the following time schedules, which are consistent with the timeframes for assessing load reductions specified in Provisions C.11. and C.12:
 - (i) By 2020;
 - (ii) By 2030; and
 - (iii) By 2040.
- (d) A process for tracking and mapping completed projects, public and private, and making the information publically available (e.g., SFEI's GreenPlanIT tool).
- (e) General guidelines for overall streetscape and project design and construction so that projects have a unified, complete design that implements the range of functions associated with the projects. For example, for streets, these functions include, but are not limited to, street use for stormwater management, including treatment, safe pedestrian travel, use as public space, for bicycle, transit, vehicle movement, and as locations for urban forestry. The guidelines should call for the Permittee to coordinate, for example, street improvement projects so that related improvements are constructed simultaneously to minimize conflicts that may impact green infrastructure.
- (f) Standard specifications and, as appropriate, typical design details and related information necessary for the Permittee to incorporate green infrastructure into projects in its jurisdiction. The specifications shall be sufficient to address the different street and project types within a Permittee's jurisdiction, as defined by land use and transportation characteristics.
- (g) Requirement(s) that projects be designed to meet the treatment and hydromodification sizing requirements in Provisions C.3.c. and C.3.d. For street projects not subject to Provision C.3.b.ii. (i.e., non-Regulated Projects), Permittees may collectively propose a single approach with their Green Infrastructure Plans for how to proceed should project constraints preclude fully meeting the C.3.d sizing requirements. The single approach can include different options to address specific issues or scenarios. That is, the approach shall identify the specific constraints that would preclude meeting the sizing requirements and the design approach(es) to take in that

situation. The approach should also consider whether a broad effort to incorporate hydromodification controls into green infrastructure, even where not otherwise required, could significantly improve creek health and whether such implementation may be appropriate, plus all other information, as appropriate (e.g., how to account for load reduction for the PCBs or mercury TMDLs).

- (h) A summary of the planning documents the Permittee has updated or otherwise modified to appropriately incorporate green infrastructure requirements, such as: General Plans, Specific Plans, Complete Streets Plans, Active Transportation Plans, Storm Drain Master Plans, Pavement Work Plans, Urban Forestry Plans, Flood Control or Flood Management Plans, and other plans that may affect the future alignment, configuration, or design of impervious surfaces within the Permittee's jurisdiction, including, but not limited to, streets, alleys, parking lots, sidewalks, plazas, roofs, and drainage infrastructure. Permittees are expected to complete these modifications as a part of completing the Green Infrastructure Plan, and by not later than the end of the permit term.
 - (i) To the extent not addressed above, a workplan identifying how the Permittee will ensure that green infrastructure and low impact development measures are appropriately included in future plans (e.g., new or amended versions of the kinds of plans listed above).
 - (j) A workplan to complete prioritized projects identified as part of a Provision C.3.e Alternative Compliance program or part of Provision C.3.j Early Implementation.
 - (k) An evaluation of prioritized project funding options, including, but not limited to: Alternative Compliance funds; grant monies, including transportation project grants from federal, State, and local agencies; existing Permittee resources; new tax or other levies; and other sources of funds.
- (3) Adopt policies, ordinances, and/or other appropriate legal mechanisms to ensure implementation of the Green Infrastructure Plan in accordance with the requirements of this provision.
- (4) Conduct outreach and education in accordance with the following:
- (a) Conduct public outreach on the requirements of this provision, including outreach coordinated with adoption or revision of standard specifications and planning documents, and with the initiation and planning of infrastructure projects. Such outreach shall include general outreach and targeted outreach to and training for professionals involved in infrastructure planning and design.
 - (b) Train appropriate staff, including planning, engineering, public works maintenance, finance, fire/life safety, and management staff on the requirements of this provision and methods of implementation.

- (c) Educate appropriate Permittee elected officials (e.g., mayors, city council members, county supervisors, district board members) on the requirements of this provision and methods of implementation.
- (5) Report on Green Infrastructure Planning as follows:
 - (a) Each Permittee shall submit documentation in the 2017 Annual Report that its framework or workplan for development of its Green Infrastructure Plan was approved by its governing body, mayor, city manager, or county manager by June 30, 2017.
 - (b) Each Permittee shall submit its completed Green Infrastructure Plan with the 2019 Annual Report.
 - (c) Each Permittee shall submit documentation of its legal mechanisms to ensure implementation of its Green Infrastructure Plan with the 2019 Annual Report.
 - (d) Each Permittee shall submit a summary of its outreach and education efforts in each Annual Report.

ii. Early Implementation of Green Infrastructure Projects (No Missed Opportunities)

Each Permittee shall:

- (1) Prepare and maintain a list of green infrastructure projects, public and private, that are already planned for implementation during the permit term and infrastructure projects planned for implementation during the permit term that have potential for green infrastructure measures.
- (2) Submit the list with each Annual Report and a summary of planning or implementation status for each public green infrastructure project and each private green infrastructure project that is not also a Regulated Project as defined in Provision C.3.b.ii. Include a summary of how each public infrastructure project with green infrastructure potential will include green infrastructure measures to the maximum extent practicable during the permit term. For any public infrastructure project where implementation of green infrastructure measures is not practicable, submit a brief description of the project and the reasons green infrastructure measures were impracticable to implement.

iii. Participate in Processes to Promote Green Infrastructure

- (1) The Permittees shall, individually or collectively, track processes, assemble and submit information, and provide informational materials and presentations as needed to assist relevant regional, State, and federal agencies to plan, design, and fund incorporation of green infrastructure measures into local infrastructure projects, including transportation projects. Issues to be addressed include coordinating the timing of funding from different sources, changes to standard designs and design criteria, ranking and prioritizing projects for funding, and implementation of cooperative in-lieu programs.

- (2) In each Annual Report, Permittees shall report on the goals and outcomes during the reporting year of work undertaken to participate in processes to promote green infrastructure.
- (3) In the 2019 Annual Report, Permittees shall submit a plan and schedule for new and ongoing efforts to participate in processes to promote green infrastructure.

iv. Tracking and Reporting Progress

- (1) The Permittees shall, individually or collectively, develop and implement regionally-consistent methods to track and report implementation of green infrastructure measures including treated area and connected and disconnected impervious area on both public and private parcels within their jurisdictions. The methods shall also address tracking needed to provide reasonable assurance that wasteload allocations for TMDLs, including the San Francisco Bay PCBs and mercury TMDLs, and reductions for trash, are being met.
- (2) In each Annual Report, Permittees shall report progress on development and implementation of the tracking methods.
- (3) In the 2019 Annual Report, Permittees shall submit the tracking methods and report implementation of green infrastructure measures including treated area, and connected and disconnected impervious area on both public and private parcels within their jurisdictions.

Table 3.1 Standard Tracking and Reporting Form for Potential Special Projects

Project No.	Permittee	Address	Application Submittal Date	Description	Site Total Acreage	Gross Density DU/Ac	FAR	Special Project Category	LID Treatment Reduction Credit	Stormwater Treatment Systems

Project No: Number of the Special Project as it appears in Table 3.1

Permittee: Name of the Permittee in whose jurisdiction the Special Project will be built.

Address: Address of the Special Project; if no street address, state the cross streets.

Submittal Date: Date that a planning application for the Special Project was submitted; if a planning application has not been submitted, include a projected application submittal date.

Description: Type of project (commercial, mixed-use, residential), number of floors, number of units, type of parking, and other relevant information.

Site Acreage: Total site area in acres.

Gross Density in DU/Ac: Number of dwelling units per acre.

FAR: Floor Area Ratio

Special Project Category: For each Special Project Category, indicate applicability. If a Category is applicable, list the specific criteria applied to determine applicability.

LID Treatment Reduction Credit: For each applicable Special Project Category, state the maximum total LID Treatment Reduction Credit available. For Category C Special Projects also list the individual Location, Density, and Minimized Surface Parking Credits available.

Stormwater Treatment Systems: List all proposed stormwater treatment systems and the corresponding percentage of the total amount of runoff identified in Provision C.3.d. for the Project’s drainage area that will be treated by each treatment system.

C.4. Industrial and Commercial Site Controls

Each Permittee shall implement an industrial and commercial site control program at all sites that could reasonably be considered to cause or contribute to pollution of stormwater runoff. Permittees shall conduct inspections, effective followup, and enforcement to abate potential and actual non-stormwater discharges, consistent with each Permittee's respective Enforcement Response Plan. These combined efforts will prevent the discharge of pollutants and impacts to beneficial uses of receiving waters. Inspections shall confirm implementation of appropriate and effective BMPs and other pollutant controls by industrial and commercial site operators.

C.4.a. Legal Authority for Effective Site Management

- i. **Task Description** – Permittees shall have sufficient legal authority to inspect, require effective stormwater pollutant control, and implement progressively stricter enforcement to achieve expedient compliance and pollutant abatement at commercial and industrial sites within their jurisdiction.
- ii. **Implementation Level** – Permittees shall have the legal authority to oversee, inspect, and require expedient compliance and pollution abatement at all industrial and commercial sites which may be reasonably considered to cause or contribute to pollution of stormwater runoff. Permittees shall have the legal authority to require implementation of appropriate BMPs at industrial and commercial facilities to address pollutant sources associated with outdoor process and manufacturing areas; outdoor material storage areas; outdoor waste storage and disposal areas; outdoor vehicle and equipment storage and maintenance areas; outdoor parking areas and access roads; outdoor wash areas; outdoor drainage from indoor areas, rooftop equipment; and contaminated and erodible surface areas; and other sources determined by the Permittees or the Water Board Executive Officer to have a reasonable potential to contribute to pollution of stormwater runoff.

C.4.b. Industrial and Commercial Business Inspection Plan (Inspection Plan)

- i. **Task Description** – Permittees shall continue to update and implement an Inspection Plan that will serve as a prioritized inspection workplan. This Inspection Plan will allow inspection staff to categorize the commercial and industrial sites within the Permittee's jurisdiction by pollutant threat and inspection frequency, change inspection frequency based on site performance, and add and remove sites as businesses open and close.
- ii. **Implementation Level**
 - (1) **Facilities For Prioritization Into Inspection Plan**

Commercial and industrial facilities with the functional aspects and types described below, and other facilities identified by the Permittees as reasonably likely to contribute to pollution of stormwater runoff, shall be prioritized for inspection on the basis of the potential for water quality impact using criteria such as pollutant sources on site, pollutants of

concern, proximity to a waterbody, potential and actual discharge history of the facility, and other relevant factors. The following are some of the functional aspects of businesses and types of businesses that shall be included in the Inspection Plan:

- (a) Sites that include the following types of functions that may produce pollutants when exposed to stormwater include, but are not limited to:
 - Outdoor process and manufacturing areas
 - Outdoor material storage areas
 - Outdoor waste storage and disposal areas
 - Outdoor vehicle and equipment storage and maintenance areas
 - Outdoor wash areas
 - Outdoor drainage from indoor areas
 - Rooftop equipment
 - Other sources determined by the Permittee or Water Board as reasonably likely to contribute to pollution of stormwater runoff.
 - (b) The following types of industrial and commercial businesses that have a reasonable likelihood to be sources of pollutants to stormwater and non-stormwater discharges:
 - Industrial facilities, as defined at 40 CFR 122.26(b)(14), including those subject to the Statewide NPDES General Permit for Stormwater Discharges Associated with Industrial Activity (hereinafter the Industrial General Permit);
 - Vehicle Salvage yards;
 - Metal and other recycled materials collection facilities, and waste transfer facilities;
 - Vehicle mechanical repair, maintenance, fueling, or cleaning facilities;
 - Building trades central facilities or yards, corporation yards;
 - Nurseries and greenhouses;
 - Building material retailers and storage;
 - Plastic manufacturers; and
 - Other facilities designated by the Permittee or Water Board to be reasonably likely to contribute to pollution of stormwater runoff.
- (2) Inspection Plan – The Inspection Plan shall be updated annually and shall contain the following information:
- (a) A description of the process for prioritizing inspections and frequency of inspections. The prioritization criteria shall assign a more frequent inspection schedule to the highest priority facilities per Provision C.4.b.ii.(1). If any geographical areas are to be targeted for

inspections due to high potential for stormwater pollution, these areas should be indicated in the Inspection Plan.

- (b) Assign appropriate inspection frequency for each industrial and commercial facility based on the priority established in Provision C.4.b.ii.(2)(a) above, potential for contributing pollution to stormwater runoff, and commensurate with the threat to water quality.
 - (c) A mechanism to include new businesses that warrant inspections.
 - (d) Total number and a list of all industrial and commercial facilities requiring inspections, within each Permittee's jurisdiction, based on the prioritization criteria established in Provision C.4.(b)ii.(2)(a). This list shall be updated annually.
 - (e) List of facilities scheduled for inspection each fiscal year of the MRP permit term. Each fiscal year's inspection list shall be added to the Inspection Plan at the beginning of the fiscal year as part of the annual update. Previous fiscal years' inspection lists shall remain in the Inspection Plan.
- (3) **Record Keeping** – For each facility identified in Provision C.4.b.ii.(2)(d), the Permittee shall maintain a database or equivalent tabular system of at least the following information:
- (a) Name and address of the business and local business operator;
 - (b) A brief description of business activity or pollutant source, including SIC code. Examples: outdoor process/manufacturing areas, outdoor material storage areas, outdoor waste storage and disposal areas, outdoor vehicle and equipment storage and maintenance areas, outdoor parking areas and access roads, outdoor wash areas, rooftop equipment, and outdoor drainage from indoor areas;
 - (c) Inspection priority and inspection frequency; and
 - (d) If coverage under the Industrial General Permit is required.
- iii. **Reporting** – The Permittees shall include the list of all industrial and commercial facilities requiring inspections identified in Provision C.4.b.ii.(2)(d) in each Annual Report.

C.4.c. Enforcement Response Plan (ERP)

- i. **Task Description** – Each Permittee shall implement and update, as needed, its ERP – a reference document for inspection staff to take consistent actions to achieve timely and effective compliance from all commercial and industrial site operators.
- ii. **Implementation Level** – The ERP shall contain the following:
 - (1) **Enforcement Procedures** – A description of the Permittee's procedures, from the discovery of problems through the confirmation of implementation of corrective actions. This shall include guidance for appropriate enforcement actions, followup inspections, referrals to another agency, appropriate time periods for implementation of corrective actions,

and the roles and responsibilities of staff responsible for implementing the ERP.

- (2) Enforcement Tools and Field Scenarios – A discussion of the various, escalating enforcement tools for different field scenarios, including, but not limited to potential discharges (e.g., housekeeping issues, evidence of actual non-stormwater discharges, lack of BMPs, inadequate BMPs, and inappropriate BMPs), actual non-stormwater discharges, non-compliance with previous enforcement actions, and sites with a history of potential and/or actual non-stormwater discharges.
- (3) Timely Correction of Potential and Actual Non-stormwater Discharges – A description of the Permittee’s procedures for assigning due dates for corrective actions. Permittees shall require timely correction of all potential and actual non-stormwater discharges. Permittees shall require active non-stormwater discharges to cease immediately. Corrective actions shall be implemented before the next rain event, but no longer than 10 business days after the potential and/or actual non-stormwater discharges are discovered. Corrective actions can be temporary and more time can be allowed for permanent corrective actions. If more than 10 business day are required for compliance, a rationale shall be recorded in the electronic database or equivalent tabular system.
- (4) Referral and Coordination with Other Agencies – Each Permittee shall enforce its stormwater ordinances to achieve compliance at sites with observed potential and actual non-stormwater discharges required in Discharge Prohibition A.1. For cases in which Permittee enforcement tools are inadequate to remedy the noncompliance, the Permittee shall refer the case to the Water Board, district attorney, or other relevant agencies for additional enforcement.

C.4.d. Inspections

i. Task Description – Each Permittee shall conduct inspections according to the Inspection Plan in Provision C.4.b.ii.(2) and the ERP in Provision C.4.c.ii. to enforce its ordinance to prevent stormwater pollution.

ii. Implementation Level

- (1) Inspections – Inspections shall be conducted to include at least the following activities:
 - (a) Observations for appropriate BMPs to prevent stormwater runoff pollution or illicit discharge;
 - (b) Observations for evidence of unauthorized discharges, illicit connections, and potential discharge of pollutants to stormwater;
 - (c) Observations for noncompliance with Permittee ordinances and other local requirements; and
 - (d) Verification of coverage under the Industrial General Permit, if applicable.

- (2) Record Keeping – Permittees shall maintain adequate records to demonstrate compliance and appropriate followup enforcement responses for facilities inspected. Permittees shall maintain an electronic database or equivalent tabular system that contains the following information regarding industrial and commercial site inspections:
 - (a) Name of facility/site inspected
 - (b) Inspection date
 - (c) Industrial General Permit coverage required (Yes or No)
 - (d) Compliance status
 - (e) Specific problems
 - (f) Type of enforcement (if applicable)
 - (g) Problem resolution date
 - (h) Additional comments

The electronic database or equivalent tabular system shall be made readily available to Water Board staff or its representative during inspections and audits.

- (3) Data Evaluation – Permittees shall evaluate the frequency of potential and actual non-stormwater discharges by business category. Note trends and, as needed, implement focused inspections or education in subsequent years to address trends.

iii. Reporting

- (1) Permittees shall include the following information in the 2015-2016 Annual Report:
 - (a) Number of inspections conducted, Number of violations issued (excluding verbal warnings), Percentage of sites inspected in violation, and number and percent of violations resolved within 10 working days or otherwise deemed resolved in a longer, but still timely manner;
 - (b) Frequency and types/categories of violations observed, Frequency and type of enforcement conducted;
 - (c) Summary of types of violations noted by business category; and
 - (d) Facilities that are required to have coverage under the Industrial General Permit, but have not filed for coverage.
- (2) Beginning with the 2016-2017 Annual Report, Permittees shall include the following information in each Annual Report:
 - (a) Number of inspections conducted;
 - (b) Number of each type of enforcement action, as listed in each Permittee's ERP, issued;
 - (c) Number of enforcement actions or discreet number of potential and actual discharges fully resolved within 10 working days or otherwise deemed resolved in a longer, but still timely manner;

- (d) Frequency of potential and actual non-stormwater discharges by business category; and
- (e) A list of facilities that are required to have coverage under the Industrial General Permit, but have not filed for coverage.

C.4.e. Staff Training

- i. Task Description** – Permittees shall provide focused training for industrial and commercial site inspectors and illicit discharge detection and elimination inspectors annually. Trainings may be program-wide, region-wide, or Permittee-specific.
- ii. Implementation Level** – At a minimum, provide inspection training, within the 5-year term of this Permit, in the following topics:
 - (1) Urban runoff pollution prevention;
 - (2) Inspection procedures;
 - (3) Business Inspection Plan;
 - (4) Enforcement Response Plan;
 - (5) Illicit Discharge Detection and Elimination; and
 - (6) Appropriate BMPs to be used at different industrial and commercial facilities.
- iii. Reporting** – The Permittees shall include the following information in each Annual Report:
 - (1) Dates of training;
 - (2) Training topics covered;
 - (3) Percentage of industrial and commercial site inspectors attending training; and
 - (4) Percentage of Illicit Discharge, Detection, and Elimination inspectors attending training.

C.5. Illicit Discharge Detection and Elimination

The purpose of this provision is to implement the illicit discharge prohibition and to ensure illicit discharges are detected and controlled that are not otherwise controlled under provisions C.4. – Industrial and Commercial Site Controls and C.6. – Construction Site Controls. Permittees shall implement an illicit discharge program that includes an active surveillance component and a centralized complaint collection and followup component to detect and eliminate illicit discharges into the MS4. Permittees shall maintain a complaint tracking and followup data system as their primary accountability reporting for this provision.

C.5.a. Legal Authority

- i. **Task Description** – Permittees shall have the legal authority to prohibit and control illicit discharges and implement progressively stricter enforcement to achieve expedient compliance.
- ii. **Implementation Level**
 - (1) Permittees shall have adequate legal authority to address illicit discharges to the MS4, including, but not limited to, the following:
 - (a) Sewage;
 - (b) Discharges of wash water resulting from the cleaning of exterior surfaces and pavement, or the equipment and other facilities of any commercial business, or any other public or private facility, including discharges from mobile cleaning businesses;
 - (c) Discharges of runoff from material storage areas, including those containing chemicals, fuels, or other potentially polluting or hazardous materials;
 - (d) Discharges of pool or fountain water containing chlorine, biocides, or other chemicals; discharges of pool or fountain filter backwash water;
 - (e) Discharges of sediment, pet waste, vegetation clippings, or other landscape or construction-related wastes; and
 - (f) Discharges of food-related wastes (e.g., grease, fish processing wastes, restaurant kitchen mat and trash bin wash water).
 - (2) Permittees shall have adequate legal authority to prohibit, discover through inspection and surveillance, and eliminate illicit connections and discharges to the MS4.
 - (3) Permittees shall have adequate legal authority to control the discharge of spills, dumping, or disposal of materials other than storm water to the MS4.

C.5.b. Enforcement Response Plan (ERP)

- i. **Task Description** – Each Permittee shall implement and update, as needed, its ERP – a reference document for inspection staff to take consistent actions to

achieve timely and effective abatement of illicit discharges and compliance from responsible parties.

ii. Implementation Level – The ERP shall contain the following:

- (1) Enforcement Procedures – A description of the Permittee’s procedures from the discovery of a problem through the confirmation of implementation of corrective actions. This shall include guidance for appropriate enforcement actions, followup inspections, referrals to another agency, appropriate time periods for implementation of corrective actions, and the roles and responsibilities of staff responsible for implementing the ERP.
- (2) Enforcement Tools and Field Scenarios – A discussion of the various, escalating enforcement tools for different field scenarios, including, but not limited to potential discharges (e.g., housekeeping issues, evidence of actual discharges, lack of BMPs, inadequate BMPs, and inappropriate BMPs), actual discharges, non-compliance with previous enforcement actions, and sites with a history of potential and/or actual discharges.
- (3) Timely Correction of Potential and Actual Discharges – A description of the Permittee’s procedures for assigning due dates for corrective actions. Each Permittee shall require timely correction of all potential and/or actual discharges. Active discharges shall be required to cease immediately. Corrective actions shall be implemented before the next rain event, but no longer than 10 business days after the potential and/or actual discharges are discovered. Corrective actions can be temporary and more time can be allowed for permanent corrective actions. If more than 10 business days are required for compliance, a rationale shall be recorded in the electronic database or equivalent tabular system.

C.5.c. Spill, Dumping, and Complaint Response Program

i. Task Description – Each Permittee shall implement a program to respond to spills, dumping, and complaints.

ii. Implementation Level

- (1) Each Permittee shall have a central contact point for the public and Permittee’s staff to report spills, dumping, and complaints. At a minimum, this central contact point shall include a phone number. Permittee shall also include, as feasible, user friendly web reporting for spills and dumping.
- (2) Each Permittee shall publicize the phone number and web reporting address, if used, to internal Permittee’s staff and the public. The Permittee’s website shall be one of the places the central contact point is publicized. The Permittee’s website shall be updated with the central contact point to report spills and dumping by June 30, 2016. This central contact point shall be readily searchable on the Permittee’s website.

- (3) Each Permittee shall require its municipal staff conducting routine maintenance and inspection activities to report illicit discharges found during their activities to the central contact point so that illicit discharge staff can investigate and track.
 - (4) Each Permittee shall maintain and update, as needed, a spill, dumping, and complaint response flow chart and/or phone tree for the Permittee's staff responsible for the spill and dumping response program. At a minimum, this flow chart and/or phone tree shall identify staff or positions responsible for receiving the complaints and investigating and abating the complaints.
 - (5) Each Permittee shall maintain and update, as needed, a spill, dumping, and complaint response flow chart and phone tree or contact list for internal use that shows the various responsible agencies and their contacts, who would be involved in illicit discharge incident response that goes beyond the Permittee's immediate capabilities.
 - (6) Each Permittee shall conduct reactive inspections in response to spill, dumping, and complaint reports and shall also conduct followup inspections, as needed, to ensure that corrective measures have been effectively implemented to achieve and maintain compliance.
- iii. Reporting** – Permittees shall provide the following information in the 2016 and 2020 Annual Reports:
- (1) The spill and dumping reporting phone number and the web address, if used;
 - (2) A screen shot of the Permittee's website showing the central contact point; and
 - (3) A discussion of how the central contact point – spill and dumping reporting phone number and, if used, the web address – is being publicized to Permittees' staff and the public.

C.5.d. Tracking and Case Followup

- i. Task Description** – All incidents or discharges reported to the spill, dumping, and complaints central contact point, that might discharge into the MS4, shall be logged to track followup and response through problem resolution. The data collected shall be sufficient to demonstrate escalating responses for repeated problems and inter/intra-agency coordination, where appropriate. It is not necessary to track and report data according to this provision if they are tracked and reported according to State Water Resource Control Board Order No. 2006-0003-DWQ.
- ii. Implementation Level** – Maintain a water quality spills, dumping, and complaints tracking and followup in an electronic database or equivalent tabular system.

The spill and discharge complaint tracking system shall contain the following information:

- (1) Complaint information:
 - (a) Date and time of complaint,
 - (b) Type of pollutant, and
 - (c) Problem Status (potential or actual discharge.).
- (2) Investigation information:
 - (a) Date and time started,
 - (b) Type of pollutant,
 - (c) Entered storm drain and/or receiving water,
 - (d) Date and time abated, and
 - (e) Type of enforcement based on the Permittee's ERP.

The electronic database or equivalent tabular system shall be made available to Water Board staff or representatives during audits or inspections.

iii. Reporting – Permittees shall provide the following information in the Annual Report:

- (1) Number of discharges reported;
- (2) Number of discharges reaching storm drains and/or receiving waters; and
- (3) Number discharges resolved in a timely manner.

C.5.e. Control of Mobile Sources

i. Task Description – Permittees shall have oversight and control of pollutants associated with mobile businesses.

ii. Implementation Level – Each Permittee shall implement a program to reduce the discharge of pollutants from mobile businesses.

- (1) The program shall include the following:
 - (a) Implementation of minimum standards and BMPs for each of the various types of mobile businesses, such as automobile washing, power washing, steam cleaning, and carpet cleaning.
 - (b) Implementation of an enforcement strategy that specifically addresses the unique characteristics of mobile businesses.
 - (c) Regularly updating mobile business inventories.
 - (d) Implementation of an outreach and education strategy to mobile businesses operating within the Permittee's jurisdiction.
 - (e) Inspection of mobile businesses, as needed.
- (2) Permittees may cooperate county-wide and/or region-wide with the implementation of their programs for mobile businesses, including sharing

of mobile business inventories, BMP requirements, enforcement action information, and education.

iii. Reporting

- (1) In the 2017 Annual Report, each Permittee shall provide the following: (a) minimum standards and BMPs for each of the various types of mobile businesses; (b) its enforcement strategy; (c) a list and summary of the specific outreach events and education conducted to the different types of mobile businesses operating within the Permittee's jurisdiction; (d) the number of inspections conducted at mobile businesses and/or job sites in 2016-2017; (e) discuss enforcement actions taken against mobile businesses in 2016-2017; (f) Permittee's inventory of mobile businesses operating within the Permittee's jurisdiction; and (g) a list and summary of the county-wide or regional activities conducted, including sharing of mobile business inventories, BMP requirements, enforcement action information, and education (Permittees' annual reports may refer to the county-wide or regional reports for this information.).
- (2) In the 2019 Annual Report, each Permittee shall include at least the following: (a) changes to minimum standards and BMPs for each of the various types of mobile businesses since the 2017 Annual Report; (b) changes to the Permittee's enforcement strategy; (c) minimum standards and BMPs developed for additional types of mobile businesses; (d) a list and summary of specific outreach events and education conducted to each type of mobile businesses operating within the Permittee's jurisdiction during the Permit term; (e) a discussion of the inspections conducted at mobile businesses and/or job sites; (f) Permittee's inventory of mobile businesses operating within the Permittee's jurisdiction; and (g) a discussion of the enforcement actions taken against mobile businesses during the permit term.

C.5.f. Municipal Separate Storm Sewer System (MS4) Map

- i. Task Description** – Each Permittee shall make the map(s) of its MS4 available.
- ii. Implementation Level** – Permittees shall make maps of the MS4 publicly available, either electronically or in hard copy. Public availability shall be made through a single point of contact that is convenient for the public, such as a staffed counter or web accessible maps. The MS4 map availability shall be publicized through Permittee directories and web pages.
- iii. Reporting** – In the 2016 and 2019 Annual Reports, Permittees shall discuss how they make MS4 maps available to the public and how they publicize the availability of the MS4 maps.

C.6. Construction Site Control

Each Permittee shall implement a construction site inspection and control program at all construction sites, with followup and enforcement consistent with each Permittee's respective ERP, to prevent construction site discharges of pollutants into the storm drains. Inspections shall confirm implementation of appropriate and effective erosion and other construction pollutant controls by construction site operators/developers. Each Permittee shall in its reporting demonstrate the effectiveness of its inspections and enforcement activities to prevent polluted construction site discharges into storm drains.

C.6.a. Legal Authority for Effective Site Management

- i. Task Description** – Permittees shall have the ability to require effective stormwater pollutant controls to prevent discharge of pollutants into the storm drains, and implement progressively stricter enforcement to achieve expedient compliance and cleanup at all public and private construction sites.
- ii. Implementation Level**
 - (1) Permittees shall have the legal authority to require at all construction sites year-round effective erosion control, run-on and runoff control, sediment control, active treatment systems (as appropriate), good site management, and non-storm water management through all phases of construction (including, but not limited to, site grading, building, and finishing of lots) until the site is fully stabilized by landscaping or the installation of permanent erosion control measures.
 - (2) Permittees shall have the legal authority to oversee, inspect, and require expedient compliance and cleanup at all construction sites year-round.

C.6.b. Enforcement Response Plan (ERP)

- i. Task Description** – Each Permittee shall implement and update, as needed, its ERP – a reference document for inspection staff to take consistent actions to achieve timely and effective compliance at all public and private construction sites.
- ii. Implementation Level** – The ERP shall contain the following:
 - (1) **Enforcement Procedures** – A description of the Permittee's procedures from the discovery of the problems through the confirmation of implementation of corrective actions. This shall include guidance for appropriate enforcement actions, followup inspections, referrals to another agency, appropriate time periods for implementation of corrective actions, and the roles and responsibilities of staff responsible for implementing the ERP.
 - (2) **Enforcement Tools and Field Scenarios** – A discussion of the various, escalating enforcement tools for different field scenarios, including, but not limited to, potential discharges (e.g., housekeeping issues, evidence of actual discharges, lack of ERP, inadequate BMPs, and inappropriate

BMPs), actual discharges, non-compliance with previous enforcement actions, and sites with a history of potential and/or actual discharges.

- (3) Timely Correction of Potential and Actual Discharges – A description of the Permittee’s procedures for assigning due dates for corrective actions. Permittees shall require timely correction of all potential and actual discharges. Permittees shall require actual non-stormwater discharges to cease immediately. Corrective actions shall be implemented before the next rain event, but no longer than 10 business days after the potential and/or actual discharges are discovered. Corrective actions can be temporary and more time can be allowed for permanent corrective actions. If more than 10 business days are required for compliance, a rationale shall be recorded in the electronic database or equivalent tabular system.

C.6.c. Best Management Practices Categories

- i. Task Description** – Permittees shall require all construction sites to have site-specific, and seasonally and phase-appropriate, effective BMPS) in the following six categories:

- Erosion Control
- Run-on and Run-off Control
- Sediment Control
- Active Treatment Systems, as necessary
- Good Site Management
- Non-Stormwater Management.

- ii. Implementation Level**

The BMPs targeting specific construction site pollutants within the six categories listed in C.6.c.i. shall be site-specific. Site-specific BMPs targeting specific pollutants from the six categories listed in C.6.c.i. may be a combination of BMPs from:

- CASQA, BMP Handbook, Construction, January 2009.
- Caltrans Stormwater Quality Handbooks, Construction Site Best Management Practices Manual, March 2003, and addenda.
- New BMPs available since the release of these handbooks.
- Other BMPs shown to provide equivalent protection.

C.6.d. Plan Approval Process

- i. Task Description** – Permittees shall review erosion control plans for consistency with local requirements and the appropriateness and adequacy of proposed BMPs for each site before issuance of grading permits for projects. Permittees shall also verify that sites disturbing one acre or more of land have filed a Notice of Intent for permit coverage under the Construction General Permit.

- ii. Implementation Level** – Before approval and issuance of local grading permits, each Permittee shall perform the following:
- (1) Review the site operator’s/developer’s erosion/pollution control plan or Stormwater Pollution Prevention Plan (SWPPP) to verify compliance with the Permittee’s grading ordinance and other local requirements. Also review the site operator’s/developer’s erosion/pollution control plan or SWPPP to verify that seasonally appropriate and effective BMPs for the six categories listed in C.6.c.i. are planned;
 - (2) For sites disturbing one acre or more of soil, verify that the site operators/developers have filed a Notice of Intent for permit coverage under the Construction General Permit; and
 - (3) Provide construction stormwater management educational materials to site operators/developers, as appropriate.

C.6.e. Inspections

i. Task Description – Permittees shall conduct inspections to determine compliance with local ordinances (grading and stormwater) and determine the effectiveness of the BMPs in the six categories listed in C.6.c.i. in preventing the discharge of construction pollutants into the storm drain; and Permittees shall require timely corrections of all actual and potential discharges observed.

ii. Implementation Level

- (1) **Wet Season Notification**
By September 1 of each year, each Permittee shall remind all site developers and/or owners disturbing one acre or more of soil, hillside projects, and high priority sites to prepare for the upcoming wet season.
- (2) **Frequency of Inspections**
Inspections shall be conducted monthly during the wet season¹² at the following sites:
 - (a) All construction sites disturbing one or more acre of land;
 - (b) All hillside projects¹³ (based on the Permittee’s map of hillside development areas or criteria, or if the Permittee does not have a map of hillside development areas or criteria, those projects on sites with $\geq 15\%$ slope) disturbing greater than or equal to 5,000 square feet; and
 - (c) High Priority Sites – Other sites determined by the Permittee or the Water Board as significant threats to water quality. In evaluating threat to water quality, the following factors shall be considered:
 - (i) Soil erosion potential or soil type;
 - (ii) Site slope;

¹² For the purpose of inspections, the wet season is defined as October through April, but sites need to implement seasonally appropriate BMPs in the six categories listed in C.6.c.i throughout the year.

¹³ Effective July 1, 2016.

- (iii) Project size and type;
- (iv) Sensitivity or receiving waterbodies;
- (v) Proximity to receiving waterbodies;
- (vi) Non-stormwater discharges; and
- (vii) Any other relevant factors as determined by the local agency or the Water Board.

(3) **Contents of Inspections**

Inspections shall focus on the adequacy and effectiveness of the site-specific BMPs implemented for the six categories listed in C.6.c.i. Permittees shall require timely corrections of all actual and potential problems observed. Inspections of construction sites shall include, but are not limited to, the following:

- (a) Assessment of compliance with Permittee's ordinances and permits related to urban runoff, including the implementation and maintenance of the verified erosion/pollution control plan or SWPPP (from C.6.d.ii.(1));
- (b) Assessment of the adequacy and effectiveness of the site-specific BMPs implemented for the six categories listed in C.6.c.i.;
- (c) Visual observations for:
 - actual discharges of sediment and/or construction related materials into storm drains and/or waterbodies.
 - evidence of sediment and/or construction related materials discharges into storm drains and/or waterbodies.
 - illicit connections, and
 - potential illicit connections.
- (d) Education on stormwater pollution prevention, as needed.

(4) **Tracking**

All inspections shall be recorded on a written or electronic inspection form. Inspectors shall follow the ERP for all actual and potential discharges discovered during the inspection.

Permittees shall track in an electronic database or tabular format all inspections. This electronic database or tabular format shall be made readily available during inspections and audits by the Water Board staff or its representatives. This electronic database or tabular format shall record the following information for each site inspection:

- (a) Site name;
- (b) Inspection date;
- (c) Weather during inspection;
- (d) Enforcement Response Level (Use ERP);
- (e) Problem(s) observed using Illicit Discharge and the six BMP categories listed in C.6.c.i.;

- (f) Resolution of Problems noted using the following three standardized categories: Problems Fixed, Need More Time, and Escalate Enforcement; and
- (g) Comments, which shall include all Rationales for Longer Compliance Time, all escalation in enforcement discussions, and any other information that may be relevant to that site inspection.

iii. Reporting

- (1) In the 2016 Annual Report, each Permittee shall certify the criteria it uses to determine hillside developments. If the Permittee is using maps of hillside developments areas or other written criteria, include a copy in the Annual Report.
- (2) In the 2015-2016 Annual Report, each Permittee shall summarize the following information:
 - (a) Total number of active sites disturbing less than one acre of soil requiring inspection;
 - (b) Total number of active sites disturbing one acre or more of soil;
 - (c) Total number of inspections conducted;
 - (d) Number and percentage¹⁴ of violations in each of the six categories listed in C.6.c.i.;
 - (e) Number and percentage¹⁵ of each type of enforcement action taken as listed in each Permittee's ERP;
 - (f) Number of discharges, actual and those inferred through evidence, of sediment or other construction related materials;
 - (g) Number of sites with discharges, actual and those inferred through evidence, of sediment or other construction related materials;
 - (h) Number and percentage¹⁶ of violations fully corrected prior to the next rain event but no longer than 10 business days after the violations are discovered or otherwise considered in a timely, though longer period; and
 - (i) Number and percentage¹⁷ of violations not fully corrected 30 days after the violations are discovered.
- (3) Beginning with the 2016-2017 Annual Report, each Permittee shall summarize the following information:

¹⁴ Percentage shall be calculated as number of violations in each category divided by total number of violations in all six categories.

¹⁵ Percentage shall be calculated as number of each type of enforcement action divided by the total number of enforcement actions.

¹⁶ Percentage shall be calculated as follows: number of violations fully corrected prior to the goal of the next rain event but no later than 10 business days after the violations are discovered divided by the total number of violations for the reporting year.

¹⁷ Percentage shall be calculated as follows: number of violations not fully corrected 30 days after the violations are discovered divided by the total number of violations for the reporting year.

- (a) Total number of active hillside sites disturbing less than one acre of soil requiring inspection;
 - (b) Total number of active sites disturbing 1 acre or more of soil;
 - (c) Total number of active sites disturbing less than one acre of soil identified as High Priority sites in C.6.e.ii.(2)(c) requiring inspections;
 - (d) Total number of inspections conducted;
 - (e) Number of each type of enforcement action taken as listed in each Permittee's ERP;
 - (f) Number of illicit discharges, actual and those inferred through evidence, of sediment or other construction-related materials;
 - (g) Number of enforcement actions or discrete number of potential and actual discharges fully corrected prior to the next rain event, but no longer than 10 business days after the potential and actual discharges¹⁸ are discovered or otherwise considered corrected in a timely, though longer period.
- (4) In each Annual Report, each Permittee shall evaluate its respective electronic database or tabular format and the summaries produced in C.6.e.ii.(4) above. This evaluation shall include findings on the program's strength, comparison to previous years' results, as well as areas that need more focused education for site owners, operators, and developers the following year.
- (5) The Executive Officer may require that the information recorded and tracked by C.6.e.ii.(4) be submitted electronically or in a tabular format. Permittees shall submit the information within 10 working days of the Executive Officer's requirement. Submittal of the information in tabular form for the reporting year is not required in each Annual Report, but it is encouraged.

C.6.f. Staff Training

- i. Task Description** – Permittees shall provide training or access to training for staff conducting construction stormwater inspections.
- ii. Implementation Level** – Permittees shall provide training at least every other year to municipal staff responsible for conducting construction site stormwater inspections. Training topics shall include information on correct uses of specific BMPs, proper installation and maintenance of BMPs, Permit requirements, local requirements, and the ERP.
- iii. Reporting** – Permittees shall include in each Annual Report the following information: training topics covered, dates of training, and the number of the Permittees' inspectors attending each training. If there was no training in that year, so state.

¹⁸ Permittees who track by discrete potential and actual discharges shall report by discrete discharges. Permittees who track by enforcement actions shall report by enforcement actions.

C.7. Public Information and Outreach

Each Permittee shall increase the awareness of a broad spectrum of the community, including a diversity of socioeconomic groups and ethnic communities, regarding the impacts of stormwater pollution on receiving waters and potential solutions to mitigate the problems caused; positively influence the waste disposal and runoff pollution generation behavior of target audiences by encouraging implementation of appropriate solutions; and involve various citizens in mitigating the impacts of stormwater pollution. Outreach required in other provisions may be conducted under Provision C.7.

C.7.a. Storm Drain Inlet Marking

- i. Task Description** – Permittees shall mark and maintain municipally-maintained storm drain inlets with an appropriate stormwater pollution prevention message, such as “No dumping, drains to Bay” or equivalent. For newly-approved, privately maintained streets, Permittees shall require storm drain inlet markings with an appropriate stormwater pollution prevention message by the project developer upon construction and maintenance of markings through the development maintenance entity. Markings on the storm drain inlets shall be verified prior to acceptance of the project.
- ii. Implementation Level**
 - (1) Inspect and maintain storm drain inlet markings of at least 80 percent of municipality-maintained inlets to ensure they are legibly labeled with a no dumping message or equivalent once per permit term.
 - (2) Storm drain inlet markings of newly developed privately-maintained streets shall be verified prior to acceptance of the project. Permittees shall require maintenance of the storm drain inlet markings through the development maintenance entity.
- iii. Reporting** – In the 2020 Annual Report, each Permittee shall (1) state how many municipally-maintained storm drain inlets it has, (2) certify that at least 80 percent of municipality-maintained storm drain inlet markings are legibly labeled with an appropriate stormwater pollution prevention message during the permit term; (3) include a picture of a labeled municipality-maintained inlet; and (4) certify that all privately-maintained streets had storm drain inlet markings verified prior to acceptance of the project and were required to maintain the storm drain inlet markings through the development maintenance entity.

C.7.b. Outreach Campaigns

- i. Task Description** – Permittees shall continue to participate in or contribute to outreach campaigns, with the goal of significantly increasing overall awareness of stormwater runoff pollution prevention messages and behavior changes in target audiences.
- ii. Implementation Level**
 - (1) Target a broad audience with a minimum of one outreach campaign with specific stormwater runoff pollution prevention messages. The outreach

campaign(s) should utilize various electronic and print media, and paid and free media to best reach the different target audiences. The outreach campaign(s) may be coordinated regionally or county-wide.

- (2) Permittees shall conduct a post-campaign effectiveness assessment/evaluation to identify and quantify the audiences' knowledge, trends, and attitudes and/or practices; and to measure the overall population's awareness of the messages and behavior changes achieved by the outreach campaigns. Effectiveness assessment/evaluation may be done regionally or county-wide.

iii. Reporting – In the Annual Report following the post-campaign effectiveness assessment/evaluation, each Permittee (or the Countywide Program, if the effectiveness assessment/evaluation was done county-wide or the regional program, if the effectiveness assessment/evaluation was done regionally) shall provide a report of the effectiveness assessment/evaluation completed, which, at minimum, shall include the following:

- (1) A description of the outreach campaign.
- (2) A summary of how the effectiveness assessment/evaluation was implemented.
- (3) An analysis of the effectiveness assessment/evaluation results.
- (4) A discussion of the measurable changes in awareness and behavior achieved.
- (5) A discussion of the planned or future outreach campaigns to influence awareness and behavior changes regarding stormwater runoff pollution prevention messages.

C.7.c. Stormwater Pollution Prevention Education

i. Task Description – Permittees shall continue to maintain a point of contact to provide the public with stormwater pollution prevention information.

ii. Implementation Level

- (1) Each Permittee shall maintain and publicize one point of contact for information on stormwater issues, watershed characteristics, and stormwater pollution prevention alternatives. This point of contact can be maintained individually or collectively and Permittees may combine this function with the spill and dumping complaint central contact point required in C.5.
- (2) Each Permittee shall place and maintain information on stormwater issues, watershed characteristics, and stormwater pollution prevention alternatives on its website. In lieu of posting the detailed informational pages directly on their individual websites, Permittees may choose to provide links from their websites to the countywide program's and/or BASMAA's websites. Each Permittee shall publicize its website.

- iii. **Reporting** – In the 2016 Annual Report, each Permittee shall list the point of contact, discuss how this point of contact and stormwater pollution website are publicized and maintained, and certify that it has a website dedicated to providing and maintaining information on stormwater issues, watershed characteristics, and stormwater pollution prevention alternatives.

C.7.d. Public Outreach and Citizen Involvement Events

- i. **Task Description** – Public outreach shall include a variety of pollution prevention message such as car washing; proper use, storage and disposal of vehicle waste fluids; household waste materials disposal; pesticide use; and trash. Public outreach events may include venues such as fairs, shows, and workshops. Citizen involvement events may include venues such as creek/shore clean-ups, adopt-an-inlet/creek/beach programs, volunteer monitoring, storm drain inlet marking, riparian restoration activities, community grants.
- ii. **Implementation Level** – Each Permittee shall annually participate and/or host a mix of public outreach and citizen involvement events according to its population, as shown in the table below:

Table 7.1 Public Outreach and Citizen Involvement Events¹⁹

Permittee Population	Number of Events
< 10,000	2
10,001– 40,000	4
40,001 – 100,000	5
100,001 – 175,000	7
175,001 – 250,000	8
> 250,000	10
Non-population-based Permittees ²⁰	6

- iii. **Reporting** – In each Annual Report, each Permittee shall list the events (name of event, event location, and event date) participated in; identity whether the event is public outreach or citizen involvement; and assess the effectiveness of efforts with appropriate measures (e.g., success at reaching a broad spectrum of the community, number of participants compared to previous years, post-event effectiveness assessment/evaluation results, quantity/volume of materials cleaned up and comparisons to previous efforts).

C.7.e. Watershed Stewardship Collaborative Efforts

- i. **Task Description** – Permittees shall individually or collectively encourage and support watershed stewardship collaborative efforts of community groups such as the Contra Costa Watershed Forum, the Santa Clara Basin Watershed

¹⁹ Permittees may claim individual credits for all events in which their Countywide Program or BASMAA participates, supports, and/or hosts, which are publicized to reach the Permittee’s jurisdiction.

²⁰ Alameda County Flood Control and Water Conservation District, Contra Costa Flood Control and Water Conservation District, Santa Clara Valley Water District, Vallejo Sanitation and Flood Control District, and Zone 7 of the Alameda County Flood Control and Water Conservation District

Management Initiative, “friends of creek” groups, and other organizations that benefit the health of the watershed, such as the Bay-Friendly Landscaping and Gardening Coalition. If no such organizations exist, encourage and support development of grassroots watershed groups or engagement of an existing group, such as a neighborhood association, in watershed stewardship activities. Coordinate with existing groups to further stewardship efforts.

- ii. **Implementation Level** – Annually demonstrate effort.
- iii. **Reporting** – In each Annual Report, each Permittee shall state the level of effort, describe the support given, state what efforts were undertaken and the results of these efforts, and provide an evaluation of the effectiveness of these efforts.

C.7.f. School-Age Children Outreach

- i. **Task Description** – Permittees shall individually or collectively implement outreach activities designed to increase awareness of stormwater and/or watershed message(s) in school-age children (K through 12).
- ii. **Implementation Level** – Implement annually and demonstrate effectiveness of efforts through assessment.
- iii. **Reporting** – In each Annual Report, each Permittee shall state the level of effort, spectrum of children reached, and methods used, and provide an evaluation of the effectiveness of these efforts.

C.7.g. Outreach to Municipal Officials

- i. **Task Description** – Permittees shall conduct outreach to municipal officials. One alternative means of accomplishing this is through the use of the Nonpoint Education for Municipal Officials program (NEMO) to significantly increase overall awareness of stormwater and/or watershed message(s) among regional municipal officials.
- ii. **Implementation Level** – At least once per permit cycle, or more often.
- iii. **Reporting** – Permittees shall summarize efforts in the 2020 Annual Report.

C.8. Water Quality Monitoring

C.8.a. Compliance Options

All Permittees shall comply with all the monitoring requirements in this Provision. Permittees may choose any of the following mechanisms, or a combination of these mechanisms, to meet the monitoring requirements:

- i. **Regional Collaboration.** Permittees are encouraged to continue contributing to the Regional Monitoring Collaborative (RMC), which coordinates water quality monitoring conducted by all the Permittees. Permittees are encouraged to consider and assign additional duties to the RMC for purposes of increased efficiencies, particularly, but not limited to, reporting duties.
- ii. **Area-wide Stormwater Program.** Permittees may contribute to their countywide or area-wide Stormwater Program, so that the Stormwater Program conducts monitoring on behalf of its members.
- iii. **Third-party Monitoring.** Permittees may use data collected by a third-party organization, such as the Water Board or Department of Pesticide Regulation, to fulfill a monitoring requirement, provided the data are demonstrated to meet the data quality objectives described in Provision C.8.b.

C.8.b. Monitoring Protocols and Data Quality

Where applicable, monitoring data must be Surface Water Ambient Monitoring Program (SWAMP) comparable. Minimum data quality shall be consistent with the latest version of the SWAMP Quality Assurance Project Plan (QAPrP) for applicable parameters, including data quality objectives, field and laboratory blanks, field duplicates, laboratory spikes, and clean techniques, using the most recent SWAMP Standard Operating Procedures.

C.8.c. San Francisco Estuary Receiving Water Monitoring

With limited exceptions, urban runoff from the Permittees' jurisdictions ultimately discharges to the San Francisco Estuary. Monitoring of the Estuary is intended to answer questions²¹ such as:

- Are chemical concentrations in the Estuary potentially at levels of potential concern and are associated impacts likely?
- What are the concentrations and masses of contaminants in the Estuary and its segments?
- What are the sources, pathways, loadings, and processes leading to contaminant related impacts in the Estuary?
- Have the concentrations, masses, and associated impacts of contaminants in the Estuary increased or decreased?

²¹ <http://www.sfei.org/rmp/objectives> (9/15/2014). While the stated objectives may change over time, the intent of this provision is for Permittees to continue contributing financially and as stakeholders in such a program as the RMP, which monitors the quality of San Francisco Bay.

- What are the projected concentrations, masses, and associated impacts of contaminants in the Estuary?

The Permittees shall participate in implementing an Estuary receiving water monitoring program, at a minimum equivalent to the San Francisco Estuary Regional Monitoring Program by contributing their fair-share financially on an annual basis.

C.8.d. Creek Status Monitoring

Creek status monitoring is intended to assess the chemical, physical, and biological impacts of urban runoff on receiving waters. In particular, the monitoring required by this provision is intended to answer the following questions:

- Are water quality objectives, both numeric and narrative, being met in local receiving waters, including creeks, rivers and tributaries?
- Are conditions in local receiving waters supportive of or likely to be supportive of beneficial uses?

i. Biological Assessment including Nutrients and General Water Quality Parameters

- (1) Field and Laboratory Method – The Permittees shall conduct biological assessments (also referred to herein as bioassessments) in accordance with SWAMP Standard Operating Procedures^{22,23,24} and shall include collection and reporting of in-stream biological and physical habitat data according to the *SWAMP Standard Operating Procedures for Bioassessment*,³ including benthic algae, benthic macroinvertebrates, water chemistry, and full characterization of physical habitat. The bioassessment sampling method shall be multihabitat reach-wide. For algae, the assessment shall include all analytes in the protocol, including diatom and soft algae taxonomy, biomass (ash-free dry weight), chlorophyll a, pebble count algae information, and reach-wide algal percent cover. Physical Habitat (PHab) Assessment shall include the SWAMP full physical habitat characterization method.

²² Ode, P.R. 2007. *Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California*, State Water Board Surface Water Ambient Monitoring Program (SWAMP), as subsequently revised [http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/swamp_sop_bio.pdf].

²³ Current methods are documented in (1) *SWAMP Standard Operating Procedure (SOP) and Interim Guidance on Quality Assurance for SWAMP Bioassessments*, Memorandum to SWAMP Roundtable from Beverly H. van Buuren and Peter R. Ode, May 21, 2007, and (2) *Amendment to SWAMP Interim Guidance on Quality Assurance for SWAMP Bioassessments*, Memorandum to SWAMP Roundtable from Beverly H. van Buuren and Peter R. Ode, September 17, 2008 both available at [http://www.waterboards.ca.gov/water_issues/programs/swamp/tools.shtml#methods].

²⁴ The Standard Operating Procedure for algae sampling and evaluation is available in the following: Fetscher, A. and K. McLaughlin, May 16, 2008. *Incorporating Bioassessment Using Freshwater Algae into California's Surface Water Ambient Monitoring Program (SWAMP)*. Technical Report 563 and current SWAMP-approved updates to Standard Operating Procedures therein. Available at [http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/563_periphyton_bioassessment.pdf].

- (2) The sampling crew shall be trained by a SWAMP-approved trainer and possess a Scientific Collection Permit from the California Department of Fish and Wildlife and participate in a SWAMP-approved inter-calibration exercise at least once in the Permit term. The Permittee may, but is not required to, modify its sampling procedures if these referenced procedures change during the Permit term. In such case, the Permittee shall notify the Water Board and follow the updated SWAMP procedures.
- (3) Macroinvertebrates shall be identified and classified according to the *Standard Taxonomic Effort (STE) Level I of the Southwestern Association of Freshwater Invertebrate Taxonomists (SAFIT)*²⁵ (except Chironomids should be identified to subfamily) using a fixed count of 600 organisms per sample. The laboratory shall follow the *SWAMP Standard Operating Procedures for Laboratory Processing and Identification of Benthic Macroinvertebrates in California*.²⁶ Soft-bodied algae and diatom algae shall be identified to the species level. Algae identifications must be harmonized with the SWAMP master taxa list. All quality assurance and quality control steps specified in the *SWAMP Quality Assurance Program Plan*¹ shall be performed.
- (4) The Permittees shall measure general water quality parameters using a sonde and collect nutrient samples at a site when biological samples are collected. The general water quality parameters shall include temperature, dissolved oxygen, pH, and specific conductance. Nutrients samples shall be analyzed for total ammonia, nitrate, nitrite, total Kjeldahl nitrogen, total nitrogen (calculated), dissolved orthophosphate and total phosphorous, silica, and chloride.
- (5) In conducting the required bioassessment monitoring, the Permittees shall take precautions to prevent the introduction or spread of aquatic invasive species.
- (6) Sample Design/Locations – The Permittees shall continue to use the probabilistic sample design developed in the previous Permit term to select sample locations. Also, Permittees shall continue to use the sampling site order and the rationale to exclude potential sites as previously defined by the sample design and reconnaissance standard operating procedures. After a statistically representative data set (i.e., approximately 30 samples) has been collected to address management questions related to condition of aquatic life, Permittees may select up to 20% of sample locations on a targeted basis to evaluate temporal trends in or other impacts to aquatic life condition.

²⁵ The current SAFIT STEs (November 28, 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at http://www.waterboards.ca.gov/water_issues/programs/swamp/safit.shtml. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board's SWAMP website.

²⁶ http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/bmi_lab_sop_final.pdf.

- (7) Frequency, Timeframe and Number of Sites – Sampling shall occur once per year during the appropriate index period (April 15-June 30) with consideration of antecedent rainfall. Sampling is a one-time grab sample for biological communities, nutrients, and general water quality collected on the same day. The Permittees shall collect at least the minimum number of samples as shown below:

Sampling Agency	Minimum Number of Samples
Alameda Permittees	20 per year
Santa Clara Permittees	20 per year
Contra Costa Permittees	10 per year
San Mateo Permittees	10 per year
Fairfield-Suisun Permittees	8 per 5-year period
Vallejo Permittees	4 per 5-year period

- (8) Followup – Sites scoring less than 0.795 according to the California Stream Condition Index²⁷ (CSCI) are appropriate for a Stressor Source Identification (SSID) project as defined in C.8.e. Such a score indicates a substantially degraded biological community relative to reference conditions. Sites where there is a substantial difference in CSCI score observed at a location relative to upstream or downstream sites are also appropriate for a SSID project. If many samples show a degraded biological condition, sites where water quality is most likely to cause and contribute to this degradation may be prioritized by the Permittee for a SSID project.

ii. Chlorine

- (1) Field and Laboratory Method – Permittees shall collect a grab sample and analyze for free and total chlorine using methods specified in the BASMAA Regional Monitoring Coalition Creek Status Monitoring Program Standard Operating Procedures.
- (2) Sample Design/Locations – Sample locations may be selected by the Permittees to monitor locations near known or suspected potable water line breaks; to coincide with bioassessment sites; to coincide with creek restoration sites; or to resample a location where chlorine has been found in the past.
- (3) Frequency, Timeframe, and Number of Samples – Samples shall be collected in spring or summer. Vallejo and Fairfield-Suisun Permittees each shall collect their samples by the end of the second year of the permit term. The Permittees shall collect at least the minimum number of samples as shown below:

²⁷ Documentation for the CSCI and information on calculating scores can be found at http://www.swrcb.ca.gov/plans_policies/biological_objective.shtml.

Sampling Agency	Minimum Number of Locations Sampled
Alameda Permittees	20 per year
Santa Clara Permittees	20 per year
Contra Costa Permittees	10 per year
San Mateo Permittees	10 per year
Fairfield-Suisun Permittees	8 per 5-year period
Vallejo Permittees	4 per 5-year period

- (4) Followup – The Permittees shall immediately resample if the chlorine concentration is greater than 0.1 mg/L. If the resample is still greater than 0.1 mg/L, then Permittees shall report the observation to the appropriate Permittee central contact point for illicit discharges so that the illicit discharge staff can investigate and abate the associated discharge in accordance with its Provision C.5.e - Spill and Dumping Complaint Response Program.

iii. Temperature

- (1) Field Method – The Permittees shall monitor temperature of their streams using a digital temperature logger or equivalent.
- (2) Sample Design/Locations – The Permittees shall monitor stream reaches that are documented to support cold water fisheries and where either past data or best professional judgment indicates that temperatures may negatively affect that beneficial use.
- (3) Frequency, Timeframe and Number of Sites – Loggers shall be installed so that water temperatures are recorded at 60-minute intervals from April through September at the number of sites specified below. Vallejo and Fairfield-Suisun Permittees each shall collect their samples by the end of the second year of the permit term. The Permittees shall collect at least the minimum number of samples as shown below:

Sampling Agency	Minimum Number of Stream Reaches Sampled
Alameda Permittees	8 per year
Santa Clara Permittees	8 per year
Contra Costa Permittees	4 per year
San Mateo Permittees	4 per year
Fairfield-Suisun Permittees	2 per 5-year period
Vallejo Permittees	2 per 5-year period

- (4) Followup – The Permittees shall identify a site for which results at one sampling station exceed the applicable temperature trigger or demonstrate a spike in temperature with no obvious natural explanation as a candidate SSID project. The temperature trigger is defined as when two or more weekly average temperatures exceed the Maximum Weekly Average Temperature of 17.0°C for a Steelhead stream, or when 20% of the results

at one sampling station exceed the instantaneous maximum of 24°C.²⁸ Permittees shall calculate the weekly average temperature by breaking the measurements into non-overlapping, 7-day periods.

iv. Continuous Monitoring of Dissolved Oxygen, Temperature, and pH

- (1) Field and Laboratory Method – The Permittees shall monitor general water quality parameters of streams using a water quality sonde or equivalent. Parameters shall include dissolved oxygen (mg/L and % saturation), pH, specific conductance (µS), and temperature (°C).
- (2) Sample Design/Locations – The Permittees shall monitor stream reaches that are documented to support cold water fisheries or where either past data or best professional judgment indicates that temperature may negatively affect the cold water beneficial use.
- (3) Frequency, Timeframe, and Number of Sites – The Permittees shall install sondes so that parameters are recorded at 15-minute intervals over 1-2 weeks in the spring concurrent with bioassessment sampling and 1-2 weeks in summer at the same sites. The Permittees shall monitor at least the minimum number of sites as shown below:

Sampling Agency	Minimum Number of Sample Sites in Spring	Minimum # of Sample Sites in Summer
Alameda Permittees	3 per year	3 per year
Santa Clara Permittees	3 per year	3 per year
Contra Costa Permittees	2 per year	2 per year
San Mateo Permittees	2 per year	2 per year
Fairfield-Suisun Permittees	2 per permit term	2 per 5-year period
Vallejo Permittees	2 per permit term	2 per 5-year period

- (4) Followup – When results at one sampling station exceed the applicable temperature or dissolved oxygen trigger or demonstrate a spike in temperature or drop in dissolved oxygen with no obvious natural explanation, the Permittees shall identify that sample site as a candidate SSID project. The Permittees shall calculate the weekly average temperature and dissolved oxygen by separating the measurements into non-overlapping, 7-day periods. The temperature trigger is defined as any of the following:
 - a. Maximum Weekly Average Temperature exceeds 17.0°C for a Steelhead stream, or 20 percent of the instantaneous results exceed 24°C⁸;

²⁸ This maximum weekly average temperature trigger corresponds to a 10% reduction in growth as listed in Table 7.3 in Sullivan K., Martin, D.J., Cardwell, R.D., Toll, J.E., Duke, S. 2000. *An Analysis of the Effects of Temperature on Salmonids of the Pacific Northwest with Implications for Selecting Temperature Criteria, Sustainable Ecosystem Institute*. The 24°C acute lethal threshold is the more protective threshold cited on page 4-1 in Sullivan et al. (2000).

- b. 20 percent of instantaneous pH results are < 6.5 or > 8.5;
- c. 20 percent of the instantaneous specific conductance results are > 2000µS, or there is a spike in readings with no obvious natural explanation; or
- d. 20 percent of instantaneous dissolved oxygen results are < 7 mg/L in a cold water fishery stream.

v. Pathogen Indicators

- (1) Field and Laboratory Method – The Permittees shall collect and analyze samples for Enterococci and *E. coli* in accordance with the most recent U.S. EPA protocols.²⁹
- (2) Sample Design/Locations – The Permittees shall collect one or more samples in a creek and at an area where water-contact recreation is likely or at an opportunistic location where there is potential to detect leaking sewerage infrastructure.
- (3) Frequency, Timeframe and Number of Sites – The Permittees shall collect samples in the dry season. Permittees shall collect at least the minimum number of samples as shown below:

Sampling Agency	Minimum Number of Sample Sites
Alameda Permittees	5 per year
Santa Clara Permittees	5 per year
Contra Costa Permittees	5 per year
San Mateo Permittees	5 per year
Fairfield-Suisun Permittees	3 per 5-year period
Vallejo Permittees	3 per 5-year period

- (4) Followup – If U.S. EPA’s statistical threshold value³⁰ for 36 per 1000 primary contact recreators is exceeded, the water body reach shall be identified as a candidate SSID project.

C.8.e. Stressor/Source Identification (SSID) Projects

When any monitoring result triggers a candidate for a SSID project followup as indicated within the provisions of C.8.d and C.8.g, the Permittees shall take the following actions, as also required by Provision C.1. If the trigger stressor or source is already known, the Permittee(s) shall take appropriate followup action to reduce the water quality stressor or source and count this action as a completed SSID Project.

SSID projects are intended to be oriented toward taking action(s) to alleviate stressors and reduce sources of pollutants; thus the Permittees shall attempt to

²⁹ U.S. EPA protocols available at http://water.epa.gov/scitech/methods/cwa/methods_index.cfm. Analytical methods listed here are also acceptable: http://water.epa.gov/grants_funding/beachgrants/chapter4.cfm

³⁰ U.S. EPA. 2012. *Recreational Water Quality Criteria*. Office of Water 820-F-12-058. Table 4.

complete all steps for half their required SSID projects, at a minimum, during the permit term.

- i. Review monitoring (C.8.d and C.8.g) results annually and maintain a list of all results exceeding thresholds described therein. Pollutant of Concern Monitoring (C.8.f) results may be included on the list as appropriate.
- ii. Select followup SSID projects from the list developed in C.8.e.i. based on criteria such as magnitude of threshold exceedance; parameter (for a variety of parameters); likelihood stormwater management action(s) could address the exceedance; and similar priorities.
 - (1) Permittees who conduct SSID projects through a regional collaborative shall collectively initiate a minimum of eight new SSID projects (minimum of one for toxicity) during the Permit term. Because these SSID projects are being conducted through a regional collaborative, all SSID project reports shall be presented in a unified, regional-level report when submitted to the Water Board. In the case that no sample exhibits toxicity, as defined within the method required in this section, during the permit term, a SSID project for toxicity is not required.
 - (2) If conducted through a countywide Stormwater Program, the Santa Clara and Alameda Permittees each shall be required to initiate five (minimum of one for toxicity) SSID projects; the Contra Costa and San Mateo Permittees each shall be required to initiate three SSID (one for toxicity) projects; and the Fairfield-Suisun and Vallejo Permittees each shall be required to initiate one SSID project(s) during the Permit term. In the case that no sample exhibits toxicity, as defined within the method required in this section, within a countywide program area during the permit term, a SSID project for toxicity is not required.
- iii. The Permittees shall conduct site specific SSID project(s) (or non-site specific if the problem is wide-spread) in the stepwise process described below:
 - (1) Step 1: The Permittees shall develop a work plan for each SSID project and submit the work plans with the Urban Creeks Monitoring Report (UCMR) such that a minimum of half the required number of SSID projects are started (at a minimum, have a workplan) by the third year of the permit term, with the goal of completing Step 2, at a minimum, for half the required SSID projects within the permit term. The work plan shall:
 - (a) Define the problem (e.g., magnitude and temporal and geographic extent) to the extent known;
 - (b) Describe the SSID project objectives, including the management context within which the results of the investigation will be used;
 - (c) Consider the problem within a watershed context and look at multiple types of related indicators, where possible (e.g., basic water quality data and biological assessment results);

- (d) List candidate causes of the problem (e.g., biological stressors, pollutant sources, and physical stressors);
 - (e) Establish a schedule for investigating the cause(s) of the trigger stressor/source to begin upon completion of the workplan. Investigations may include evaluation of existing data, desktop analyses of land uses and management actions, and/or collection of new data.
 - (f) Conduct a site specific study (or non-site specific if the problem is wide-spread) in a stepwise process to identify and isolate the cause(s) of the trigger stressor/source. This study should follow guidance for Toxicity Reduction Evaluations (TRE) or Toxicity Identification Evaluations (TIE)¹⁸. A TRE, as adapted for urban stormwater, allows Permittees to use other sources of information (such as industrial facility stormwater monitoring reports) in attempting to determine the trigger cause, potentially eliminating the need for a TIE. If a TRE does not result in identification of the stressor/source, Permittees shall conduct a TIE. For toxicity studies where there is no chemical pollutant associated with the creek status monitoring sample exhibiting toxicity, a TIE should be conducted. Where chemical data indicate a pollutant, such as fipronil or a pyrethroid, is present at adverse effects levels in the sample location, it is not necessary to conduct a TIE, and the SSID project would be considered complete;
 - (g) For physical habitat, physiochemical pollutants (dissolved oxygen, pH, conductivity, temperature), nutrients, metals, and other stressors, the investigation shall generally follow Step 5 (Identify Probably Causes) of the Causal Analysis/Diagnosis Decision Information System (CADDIS);³¹
 - (h) For pathogen indicators, the study shall generally follow the California Microbial Source Identification Manual: A Tiered Approach to Identifying Fecal Pollution Sources to Beaches (2013) or equivalent process or method;³² and
 - (i) The Permittees may modify the SSID Work Plan in subsequent years of the Permit term in order to address new Creek Status (or POC) results that exceed applicable thresholds and are of a higher priority based on the criteria in C.8.e.ii.
- (2) Step 2: The Permittees shall conduct SSID investigations according to the schedule in each SSID project work plan and shall report on the status of SSID investigations annually in the UCMR. Local stormwater Permittees shall be advised of the SSID project and consulted regarding

³¹ http://www.epa.gov/caddis/si_step5_overview.html

³² http://www.swrcb.ca.gov/water_issues/programs/beaches/cbi_projects/docs/sipp_manual.pdf

possible local sources and potential management actions during the work plan phase and periodically throughout the SSID project.

- (3) Step 3: Follow-up actions.
 - (a) When a Permittee(s) determines that discharges to its stormwater collection system(s) contribute to an exceedance of a water quality standard or an exceedance of a trigger threshold such that the water body's beneficial uses are not supported, the Permittee(s) shall submit a report in the UCMR that describes BMPs that are currently being implemented, and the current level of implementation, and additional BMPs that will be implemented, and/or an increased level of implementation, to prevent or reduce the discharge of pollutants that are causing or contributing to the exceedance of WQS. The report shall include an implementation schedule.
 - (b) If a Permittee(s) determines that discharges from its (their) stormwater collection system(s) are not contributing to an exceedance of a water quality standard, the Permittee(s) may end the SSID project. The Executive Officer must concur in writing before an SSID project is determined to be completed.

In cases where SSID investigations prove inconclusive (e.g., the trigger threshold exceedance is episodic or reasonable methods do not reveal a stressor/source), the Permittee(s) may request that the Executive Officer consider the SSID project complete.

- (c) Reporting: The Permittees shall submit an SSID status report in each UCMR which summarizes the actions taken in C.8.e.i-iii above. The SSID status report shall include a running summary of all SSID projects (C.8.e.ii), including start date, brief problem definition, and schedule for each project. As projects progress, the SSID report shall describe findings and monitoring results and outline steps for the upcoming year for each ongoing project. The Permittees shall submit the SSID status report with each UCMR.
- iv. As long as Permittees have complied with the procedures set forth above, they do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed to do so by the Water Board.

C.8.f. Pollutants of Concern Monitoring

Pollutants of Concern (POC) monitoring is intended to assess inputs of POCs to the Bay from local tributaries and urban runoff, provide information to support implementation of TMDLs and other pollutant control strategies, assess progress toward achieving wasteload allocations for TMDLs and help resolve uncertainties associated with loading estimates and impairments associated with these pollutants.

In particular, monitoring required by this provision must be directed toward addressing the following five priority POC management information needs:

1. **Source Identification** - identifying which sources or watershed source areas provide the greatest opportunities for reductions of POCs in urban stormwater runoff;
2. **Contributions to Bay Impairment** - identifying which watershed source areas contribute most to the impairment of San Francisco Bay beneficial uses (due to source intensity and sensitivity of discharge location);
3. **Management Action Effectiveness** - providing support for planning future management actions or evaluating the effectiveness or impacts of existing management actions;
4. **Loads and Status** - providing information on POC loads, concentrations, and presence in local tributaries or urban stormwater discharges; and
5. **Trends** - evaluating trends in POC loading to the Bay and POC concentrations in urban stormwater discharges or local tributaries over time.

Not all information needs apply to all POCs (see Table 8.2 below for details).

- i. **Sampling Methods** – The Permittees shall implement or cause to be implemented the monitoring components shown in Table 8.1 in order to address each of the five POC management information needs.

Table 8.1 POC Monitoring Methods

Monitoring Type	Information Need	Monitoring Methods
1	Identify Source Areas	Monitoring methods to identify watershed sources of POCs should include: <ul style="list-style-type: none"> • Collection and analysis of POCs on sediments in urban stormwater runoff that are transported through MS4s or receiving waters during stormwater runoff events; or • Collection and analysis of POCs on bedded sediments deposited in MS4s or receiving waters; or • Collection and analysis of POCs in stormwater runoff or bedded sediments on source area properties (e.g. private property); or, • Other monitoring methods designed to identify specific sources or uses of POCs (e.g., caulk in roadways or building materials) or watershed source areas.
2	Identify watershed areas contributing most to Bay impairment	Monitoring methods to identify watershed areas contributing most to Bay impairment should include: <ul style="list-style-type: none"> • Methods described for Monitoring Type #1; or • Collection of small fish tissue (or equivalent indicator) near tributary confluences with the Bay and analysis for POCs; or • Collection of bedded sediments near tributary confluences with the Bay and analysis for POCs.
3	Provide support for future or existing management actions	Monitoring methods to support future or existing management actions should include: <ul style="list-style-type: none"> • Methods described for Monitoring Type #1, with a focus on monitoring the effectiveness of specific management actions in reducing or avoiding POCs in MS4 discharges.
4	Provide information on POC loads, concentrations, or presence / absence	Monitoring methods to provide information on POC loads, concentrations or presence/absence should include: <ul style="list-style-type: none"> • Methods described for Monitoring Type #1, in combination with quantitative modeling associated with quantifying POC loads from MS4s or small tributaries to the Bay.
5	Evaluate POC trends	Monitoring methods to provide information on trends in POC loads and concentrations overtime may include: <ul style="list-style-type: none"> • Methods described for Monitoring Type #1 or #2.

ii. Parameters and Monitoring Frequency – The Permittees shall conduct POC monitoring consistent with the monitoring intensity and frequency specified in Table 8.2. Monitoring frequencies are described as the total and minimum number of samples that Permittees within a countywide Stormwater Program shall collectively collect and analyze in a Water Year (October 1 – September 30). Minimum number of samples that Permittees within a countywide Stormwater Program shall collect by the end of the Permit term to address each monitoring type are also specified.

Table 8.2 POC Monitoring Parameters, Effort and Type

Pollutant of Concern	Total Samples^a Collected /Analyzed (yearly minimum) for each Countywide Program: Alameda, Contra Costa, Santa Clara, and San Mateo	Minimum Number of Samples for each Monitoring Type^b
Polychlorinated Biphenyls (PCBs)	80 (8)	8 samples minimum for monitoring types 1-5
Total Mercury	80 (8)	8 samples minimum for monitoring types 1-5
Copper	20 (2)	4 samples minimum for monitoring types 4-5
Emerging Contaminants^c: Must include but not limited to: Perfluorooctane Sulfonates (PFOS, in sediment) Perfluoroalkyl sulfonates (PFAS, in sediment) Alternative flame retardants	See footnote c	See footnote c
Ancillary Parameters^d: Total organic carbon Suspended sediments (SSC) Hardness	as necessary to address management questions for other POCs – see footnote d	
Nutrients: Ammonium, Nitrate, Nitrite, Total Kjeldahl Nitrogen, Orthophosphate, Total Phosphorus (all nutrients collected together for each sample)	20 (2) for each nutrient species	20 samples for monitoring type 4 for each nutrient species.

^a This column indicates the total number of samples, across all applicable monitoring types (i.e., monitoring types 1-5 from Table 8.1), that must be collected during the permit term. The number in parentheses indicates the minimum number of samples that must be collected, across all applicable monitoring types, during each of the five years of the permit. For example, 80 total samples must be collected for both total PCBs and mercury by each set of Santa Clara County, San Mateo County, Alameda County, and Contra Costa County Permittees during the term of the permit. Permittees must collect a minimum of 8 PCBs samples every year of the permit term, including the final year.

^b This column indicates the monitoring types from Table 8.1 that are applicable to this POC along with the minimum number of samples that shall be collected by each set of Permittees (i.e., Santa Clara County, San Mateo County, Alameda County, and Contra Costa County) by the end of year four of the permit. The applicable monitoring type(s) is also stated to illustrate the management information need(s) motivating the collected data. For example, each set of Permittees (i.e., the Countywide Programs for Santa Clara, San Mateo, Alameda, and Contra Costa counties) must collect and analyze at least 8 samples to address monitoring types 1-5 in Table 8.1 for both total PCBs and total mercury. Some collected samples may address multiple management questions.

^c The Permittees shall conduct or cause to be conducted a special study that addresses relevant management information needs for emerging contaminants. The special study must account for relevant CECs in stormwater and would address at least PFOS, PFAS, and alternative flame retardants being used to replace PBDEs.

^dTotal Organic Carbon (TOC) data are not used independently. Rather, TOC can be useful for normalizing PCBs data collected in water and sediment. TOC shall be collected concurrently with PCBs data that should be normalized to TOC. Similarly, suspended sediment concentrations (SSC) samples should be collected and analyzed when water samples are collected that will be used to assess loads, loading trends, or BMP effectiveness for PCBs and Mercury. Hardness data are used in conjunction with copper concentrations collected in fresh water.

iii. POC Parameters and Analytical Methods – Samples collected consistent with Table 8.2 shall be analyzed for parameters listed in Table 8.3. Where no laboratory method is listed in Table 8.3, Permittees shall use U.S. EPA or SWAMP-approved methods.

Table 8.3 POC Analytes and Analytical Methods

Pollutant of Concern	Matrix	Analyte(s) or Test Species	Laboratory Analytical Methods
Polychlorinated Biphenyls (PCBs)	Water	Total PCBs	U.S. EPA 1668 (RMP 40)
		Total Organic Carbon	
		Suspended sediments (SSC)	
	Bedded Sediment	Total PCBs	As appropriate to address the management information need: U.S. EPA 1668 (RMP 40), 8082A, or 8270D modified by Method 1625
Total organic carbon			
Mercury	Water	Total Mercury	
	Bedded Sediment	Total Mercury	
Copper	Water	Total Copper	
		Dissolved Copper	
		Hardness	
Nutrients	Water	Ammonium	
		Nitrate	
		Nitrite	
		Total Kjeldahl Nitrogen	
		Orthophosphate	
		Total Phosphorus	

C.8.g. Pesticides and Toxicity Monitoring

The Permittees shall conduct wet weather and dry weather monitoring of pesticides and toxicity in urban creeks. If a statewide coordinated pesticides and pesticides-related toxicity monitoring program begins collecting data on an ongoing basis during the Permit term, Permittees may request the Executive Officer modify, reduce or eliminate this monitoring requirement, provided the resultant change, viewed in context of the statewide program, would result in overall improvement of pesticide monitoring data collection.

i. Toxicity in Water Column - Dry Weather

(1) Field and Laboratory Method – The Permittees shall collect grab samples of receiving water using applicable SWAMP comparable methodology. These samples shall be analyzed for the test organisms listed, and by the methods described, on Table 8.4.

Toxicity shall be evaluated using the Test of Significant Toxicity (TST) statistical approach.³³ Each sample shall be subject to determination of “Pass” or “Fail” and shall indicate “Percent Effect” from toxicity using nondiluted samples. The TST null hypothesis shall be “mean sample response $\leq 0.75 \times$ mean control response.” A test result that rejects this null hypothesis shall be reported as “Pass.” A test result that does not reject this null hypothesis shall be reported as “Fail.” The relative “Percent Effect” of the sample is defined and reported as: $((\text{Mean control response} - \text{Mean sample response}) \div \text{Mean control response}) \times 100$.

Table 8.4 Water Column Aquatic Toxicity Analytical Procedures

Test Species	Test Endpoint(s)	Units	U.S. EPA Method
<i>Pimephales promelas</i> (Fathead Minnow)	Larval Survival and Growth	Pass or Fail using TST, % Effect	EPA-821-R-02-013 ³⁴ EPA 833-R-10-003 ³⁵
<i>Ceriodaphnia dubia</i> (Freshwater Crustacean)	Survival ^a	Pass or Fail, % Effect <25% Passes, >25% Fails	EPA-821-R-02-013 EPA 833-R-10-003
<i>Ceriodaphnia dubia</i> (Freshwater Crustacean)	Reproduction	Pass or Fail using TST, % Effect	EPA-821-R-02-013 EPA 833-R-10-003
<i>Selenastrum capricornutum</i> (Green Algae)	Growth	Pass or Fail using TST, % Effect	EPA-821-R-02-013 EPA 833-R-10-003
<i>Hyaella azteca</i> (Freshwater Amphipod)	Survival	Pass or Fail using TST, % Effect ^b	EPA-821-R-02-012 ³⁶ EPA 833-R-10-003
<i>Chironomus dilutus</i> (midge)	Survival	Pass or Fail using TST, % Effect ^b	EPA-821-R-02-012 EPA 833-R-10-003

³³ National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1.

³⁴ *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*. EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136.

³⁵ *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003) 2010.

³⁶ *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012, 2002; Table IA, 40 CFR Part 136). See Appendix B, page 238, for *H.azteca* and *C.dilutus* methods.

^aThe *Ceriodaphnia dubia* chronic toxicity test design for the survival endpoint is not amenable to the TST, Welch's t-test so the survival endpoint will be determined as a percent effect using the TST approach. A percent effect less than 25 percent will be considered a "pass," and a percent effect equal to or greater than 25 percent will be considered a "fail."

^b For *Hyalella* and *Chironomus* acute toxicity test methods, the test result will be considered a "pass," regardless of a TST determination of "fail" if the percent survival in the receiving water is equal to or greater than 90 percent.

- (2) Sample Design/Locations – Sample locations may be selected by the Permittees to monitor locations where toxicity could be likely; to coincide with bioassessment sites; to coincide with creek restoration sites; or to resample a location where toxicity has been found in the past.
- (3) Frequency, Timeframe and Number of Sites – The Permittees shall collect samples annually in the dry season. Vallejo and Fairfield-Suisun Permittees each shall collect their sample by the end of the second water year of the permit term. The Permittees shall collect at least the minimum number of samples as shown below:

Sampling Agency	Minimum Number of Sample Sites
Alameda Permittees	2 per year
Santa Clara Permittees	2 per year
Contra Costa Permittees	1 per year
San Mateo Permittees	1 per year
Fairfield-Suisun & Vallejo Permittees collectively	1 per 5-year period

ii. Toxicity, Pesticides and Other Pollutants in Sediment - Dry Weather

- (1) Field and Laboratory Method – The Permittees shall collect grab samples of creek sediment using applicable SWAMP comparable methodology. These samples shall be analyzed for the pollutants and organisms listed and by the methods described on Table 8.5. Where no laboratory method is listed in Table 8.5, Permittees shall use U.S. EPA or SWAMP-approved methods.

Table 8.5 Sediment Toxicity & Pollutants Analytical Procedures

Test Species or Pollutant	Units	Laboratory Method
<i>Hyalella azteca</i> and <i>Chironomus dilutus</i> survival ^a	Pass/Fail using TST, % Effect ^a	EPA-600/R-99-064 ³⁷
Pyrethroids: bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin		EPA 3540C followed by EPA 8270D by NCI-GCMS
Carbaryl		
Fipronil		
Total PAHs		
Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Zinc		
Total organic carbon		
Grain size		

³⁷ *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates* (EPA 600/R-99-064) Second Edition. March 2000.

^a For *Hyaella* and *Chironomus* acute toxicity test methods, the test result will be considered a "pass," regardless of a TST determination of "fail" if the percent survival in the receiving water is equal to or greater than 90 percent. The false positive rate (beta error) is 0.05 and the negative rate (alpha error) is 0.25 for these test methods.

- (2) Sample Design/Locations – Samples shall be collected at fine-grained depositional locations. Such sample locations may be selected by the Permittees to monitor locations where toxicity could be likely, to coincide with bioassessment sites, or to resample a location where toxicity has been found in the past, for example.
- (3) Frequency, Timeframe, and Number of Sites – The Permittees shall collect samples annually during the dry season. Vallejo and Fairfield-Suisun Permittees each shall collect their sample by the end of the second year of the permit term. Permittees shall collect at least the minimum number of samples as shown below:

Sampling Agency	Minimum Number of Sample Sites
Alameda Permittees	2 per year
Santa Clara Permittees	2 per year
Contra Costa Permittees	1 per year
San Mateo Permittees	1 per year
Fairfield-Suisun & Vallejo Permittees collectively	1 per 5-year period

iii. Wet Weather Pesticides and Toxicity Monitoring

- (1) Field and Laboratory Method – The Permittees shall collect water column samples and analyze them for the following parameters using the methods specified in Tables 8.4 and 8.5. For imidacloprid, Permittees shall specify an analytical method that achieves a reporting level as close to 0.05 ppb as possible, but in no case exceeds 0.1 ppb).
 - Pyrethroids: bifenthrin, cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin
 - Imidacloprid
 - Indoxacarb³⁸
 - Fipronil
 - Toxicity
- (2) Sample Design/Locations – The Permittees shall collect samples annually during storm events. Sample locations shall be representative of urban watersheds (i.e., bottom of watershed locations).
- (3) Frequency, Timeframe, and Number of Sites – If this (C.8.g.iii) sampling is conducted by the RMC on behalf of all Permittees, a total of ten (10) samples shall be collected over the Permit term, with a minimum of six (6) samples collected by the end of the third water year of the permit term. If this (C.8.g.iii)

³⁸ Indoxacarb shall be a required analyte in the water year following notification by the Executive Officer that an analytical method with appropriate quality assurance and sensitivity is available. At the time of Permit issuance, an analytical method has not been developed.

sampling is conducted by Countywide Stormwater Programs, Permittees shall collect at least the minimum number of samples as shown below:

Sampling Agency	Minimum Number of Sample Sites
Alameda Permittees	1 per year
Santa Clara Permittees	1 per year
Contra Costa Permittees	1 per year
San Mateo Permittees	1 per year
Fairfield-Suisun & Vallejo Permittees collectively	1 per 5-year period

- iv. **Followup** – The Permittees shall identify a site as a candidate SSID project when analytical results indicate any of the following:
- (1) A toxicity test of growth, reproduction, or survival of any test organism is reported as “fail” in both the initial sampling and a second, followup sampling, and both have $\geq 50\%$ Percent Effect;
 - (2) A pollutant is present at a concentration exceeding its water quality objective in the Basin Plan;
 - (3) For pollutants without WQOs, results exceed Probable Effects Concentrations or Threshold Effects Concentrations.³⁹

C.8.h. Reporting

- i. **Water Quality Standard Exceedence** – When data collected pursuant to C.8.a.- C.8.g. indicate that discharges are causing or contributing to an exceedence of an applicable water quality standard, the Permittees shall notify the Water Board within no more than 30 days of such a determination and submit a followup report in accordance with Provision C.1 requirements. This reporting requirement shall not apply to continuing or recurring exceedences of water quality standards previously reported to the Water Board or to exceedences of pollutants that are to be addressed pursuant to Provisions C.9 through C.14 of this Order, consistent with Provision C.1.
- ii. **Electronic Reporting** – The Permittees shall submit to the California Environmental Data Exchange Network (CEDEN) all results from monitoring conducted pursuant to Provisions C.8.d. Creek Status, C.8.e. SSID Projects (as applicable), C.8.f. Pollutants of Concern and C.8.g. Pesticides and Toxicity. Data that CEDEN cannot accept are exempt from this requirement.
 - (1) Data shall be submitted in SWAMP formats and with the quality controls required by CEDEN.

³⁹ TEC and PEC are found in MacDonald, D.D., G.G. Ingersoll, and T.A. Berger. 2000. Development and Evaluation of Consensus-based Sediment Quality Guidelines for Freshwater Ecosystems. *Archives of Environ. Contamination and Toxicology* 39(1):20–31. More recent TECs and PECs may be used if lower than stated in MacDonald 2000.

- (2) Data collected during the previous October 1–September 30 period shall be submitted by March 31 of each year.

iii. Urban Creeks Monitoring Report – The Permittees shall submit a comprehensive Urban Creeks Monitoring Report no later than March 31 of each year, reporting on all data collected during the foregoing October 1–September 30 period. Each Urban Creeks Monitoring Report shall contain summaries of Creek Status, SSID Projects, and Pollutants of Concern Monitoring including, as appropriate, the following:

- (1) Immediately following the Table of Contents, a completed Water Year Summary Table that lists each Program’s monitoring sites, with a row for each site. The table columns contain: Site ID; creek name; land use; latitude; longitude; bioassessment, nutrient; chlorine; water column toxicity; sediment toxicity and chemistry; pathogens; temperature loggers; and general water quality (sonde data). For each site, list the site information and check the parameters sampled at that site. This will provide a summary of all Creek Status Monitoring conducted that water year.
- (2) An SSID status report pursuant to Provision C.8.e.iv.
- (3) For all data, a statement of the data quality.
- (4) An analysis of the data, which shall include the following:
 - (a) Identification and analysis of any trends in stormwater or receiving water quality which shall include:
 - Calculations of CSCI scores and physical habitat endpoints;
 - Comparison of CSCI scores to:
 - Each other;
 - Any applicable, available reference site(s); and
 - Physical habitat endpoints.
 - (b) A discussion of the data for each monitoring program component, which shall:
 - Discuss monitoring data relative to prior conditions, beneficial uses and applicable water quality standards as described in the Basin Plan, the Ocean Plan, or the California Toxics Rule or other applicable water quality control plans;
 - Where appropriate, develop hypotheses to investigate regarding pollutant sources, trends, and BMP effectiveness;
 - Identify and prioritize water quality problems;
 - Identify potential sources of water quality problems;
 - Describe followup actions;
 - Evaluate the effectiveness of existing control measures; and
 - Identify management actions needed to address water quality problems.

- iv. Pollutants of Concern Monitoring Reports** – By October 15 of each year of the permit (beginning in 2016), the Permittees shall submit a report describing the allocation of sampling effort for POC monitoring for the forthcoming year (i.e., the water year that began October 1 of that year) and what was accomplished for POC monitoring during the preceding water year. The report shall include (for preceding year and projected for forthcoming year): monitoring locations, number and types of samples collected, purpose of sampling (management question addressed), and analytes measured. Any data not reportable to CEDEN should be included in the following Urban Creeks Monitoring Report due annually on March 31.
- v. Integrated Monitoring Report** – No later than March 31 of the fifth year of the Permit term, Permittees shall submit an Integrated Monitoring Report in lieu of the annual Urban Creeks Monitoring Report. This report will be part of the next Report of Waste Discharge for the reissuance of this Permit. The Integrated Monitoring Report shall report on all the data collected since the previous Integrated Monitoring Report and shall contain the following:
- (1) The Water Year Summary Table, as described in Provision C.8.h.iii, containing information pertaining to the fourth year monitoring data;
 - (2) A comprehensive analysis of all data collected pursuant to Provision C.8. since the previous Integrated Monitoring Report, and may include other pertinent studies;
 - (3) For POCs, the report shall include methods, data, calculations, load estimates, and source estimates for each POC parameter, as applicable; and
 - (4) The Integrated Monitoring Report shall include a budget summary for each monitoring requirement and recommendations for future monitoring.
- vi. Standard Report Content** – All monitoring reports shall include the following:
- (1) The purpose of the monitoring and briefly describe the study design rationale;
 - (2) Quality Assurance/Quality Control summaries for sample collection and analytical methods, including a discussion of any limitations of the data;
 - (3) Brief descriptions of sampling protocols and analytical methods;
 - (4) Sample location description, including water body name and segment and latitude and longitude coordinates;
 - (5) Sample ID, collection date (and time if relevant), media (e.g., water, filtered water, bed sediment, tissue);
 - (6) Concentrations detected, measurement units, and detection limits;
 - (7) Assessment, analysis, and interpretation of the data for each monitoring program component;
 - (8) A listing of volunteer and other non-Permittee entities whose data are included in the report; and
 - (9) Assessment of compliance with applicable water quality standards.

C.9. Pesticides Toxicity Control

To prevent the impairment of urban streams by pesticide-related toxicity, the Permittees shall implement a pesticide toxicity control program that addresses, within their jurisdictions, their own and others' use of pesticides that pose a threat to water quality and that have the potential to enter the municipal conveyance system.

This provision implements requirements of the TMDL for Diazinon and Pesticide-Related Toxicity for Urban Creeks in the region. The TMDL includes urban runoff allocations for Diazinon of 100 ng/l and for pesticide-related toxicity of 1.0 Acute Toxicity Units (TUa) and 1.0 Chronic Toxicity Units (TUc) to be met in urban creek waters. U.S. EPA phased out urban uses of diazinon in the mid-2000s, and diazinon is no longer detected in urban creeks in the region. Pesticide-related toxicity continues to occur, because State and federal pesticide regulatory programs, as currently implemented, allow pesticides to be used in ways that cause or contribute to aquatic toxicity. In adopting the TMDL implementation plan, the Water Board recognized that (1) Permittees must control their own use of pesticides, but Permittees are not solely responsible for attaining the allocations, because their authority to regulate others' pesticide use is constrained by federal and State law; and (2) because a realistic date for achieving allocations cannot be discerned given the current framework for pesticide regulation, reviewing the implementation strategy every five years, at permit reissuance, is the appropriate timeline. Accordingly, the Permittees' requirements for addressing the allocations are set forth in the TMDL implementation plan and are included in this provision.

Urban-use pesticides of concern to water quality include: diamides (chlorantraniliprole and cyantraniliprole); diuron, fipronil and its degradates; indoxacarb; organophosphorous insecticides (chlorpyrifos, diazinon, and malathion); pyrethroids (metofluthrin, bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, and permethrin); and carbamates (e.g., carbaryl and aldicarb).

C.9.a. Maintain and Implement an Integrated Pest Management (IPM) Policy or Ordinance and Standard Operating Procedures

All Permittees have developed a pesticide toxicity control program for use of pesticides in municipal operations and on municipal property based on the concepts of IPM⁴⁰ and have adopted an IPM policy or ordinance and standard operating procedures to implement the policy or ordinance.

⁴⁰ IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and non-target organisms, and the environment. IPM techniques could include biological controls (e.g., ladybugs and other natural enemies or predators); physical or mechanical controls (e.g., hand labor or mowing, caulking entry points to buildings); cultural controls (e.g., mulching, alternative plant type selection, and enhanced cleaning and containment of food sources in buildings); and reduced risk chemical controls (e.g., soaps or oils).

- i. Task Description** – The Permittees shall implement their IPM policies or ordinances and standard operating procedures and update their IPM policies or ordinances and standard operating procedures as needed to ensure their use of pesticides do not cause or contribute to pesticide-caused toxicity in receiving waters.
- ii. Implementation** - Each Permittee shall require municipal employees and contractors to adhere to its IPM policy or ordinance and standard operating procedures in all the Permittee’s municipal operations and on all municipal property.
- iii. Reporting**
 - (1) In their Annual Reports, the Permittees shall certify they are implementing their IPM policy or ordinance and standard operating procedures, report trends in quantities and types of pesticide active ingredients used, and explain any increases in use of pesticides of concern to water quality as listed in the introduction section of this Provision. Trends and quantities of pesticide active ingredient usage shall be reported beginning with the September 2017 Annual Report.
 - (2) In their Annual Reports, the Permittees shall provide a brief description (e.g., one or two sentences) of two IPM tactics or strategies implemented in the reporting year. Examples could include non-chemical strategies such as monitoring, mowing weeds, mulching, and redesign of problematic landscapes; preventive actions such as sealing holes and gaps in structures, improving sanitation, and outreach to employees about how their actions contribute to pest presence; and examples of integration of several strategies into a cohesive whole, such as tackling a rat problem by educating building occupants, improving sanitation, trimming trees away from buildings, sealing holes in the structure, and trapping rodents. To the extent possible, different IPM actions should be described each year, so that a range of IPM actions is described over the permit term.
 - (3) IPM policies or ordinances and IPM standard operating procedures shall be submitted to the Water Board upon request.

C.9.b. Train Municipal Employees

- i. Task Description**– The Permittees shall ensure that all municipal employees who, within the scope of their duties, apply or use pesticides are trained in IPM practices and the Permittee’s IPM policy or ordinance and standard operating procedures. This training may also include other training opportunities such as Bay-Friendly Landscape Maintenance Training & Qualification Program, provided both structural and landscape pest control training are provided.
- ii. Reporting**
 - (1) In their Annual Reports, the Permittees shall report the percentage of municipal employees who apply pesticides who have received training in their IPM policy or ordinance and IPM standard operating procedures

within the last year. This report shall briefly describe the nature of the training, such as tailgate training provided by a Permittee's IPM coordinator, IPM training through the Pesticide Applicators Professional Association, etc.

- (2) The Permittees shall submit training materials (e.g., course outline, date, and list of attendees) upon request.

C.9.c. Require Contractors to Implement IPM

- i. Task Description** – The Permittees shall hire IPM-certified contractors or include contract specifications requiring contractors to implement IPM, so that all contractors practice IPM on municipal properties. The Permittees shall observe contractor pesticide applications to verify that contractors implement their contract specifications in accordance with the Permittee's IPM policies or ordinance and standard operating procedures. Permittees shall note that contractor certification as a pest control advisor (PCA) alone is not evidence of IPM implementation. Similarly, IPM certifications awarded to a pest control company may not guarantee an individual employee will always use IPM strategies. Thus, periodic Permittee observation of contractor performance is necessary.
- ii. Implementation** – Permittees shall periodically monitor their contractors' activities to verify full implementation of IPM techniques. This shall include, at a minimum, evaluation of lists of pesticides and amounts of active ingredient used.
- iii. Reporting** – In their Annual Reports, the Permittees shall state how they verified contractor compliance with IPM policies and any actions taken or needed to correct contractor performance.

C.9.d. Interface with County Agricultural Commissioners

- i. Task Description** – The Permittees shall maintain communications with county agricultural commissioners to (a) get input and assistance on urban pest management practices and use of pesticides, (b) inform them of water quality issues related to pesticides, and (c) report any observed or citizen-reported violations of pesticide regulations (e.g., illegal handling and applications of pesticides) associated with stormwater management, particularly the California Department of Pesticide Regulation (DPR) surface water protection regulations for outdoor, nonagricultural use of pyrethroid pesticides by any person performing pest control for hire (http://www.cdpr.ca.gov/docs/legbills/rulepkgs/11-004/text_final.pdf).
- ii. Reporting** – In their Annual Reports, the Permittees shall briefly describe the communications they have had with county agricultural commissioners and report followup actions to correct violations of pesticide regulations.

C.9.e. Public Outreach

- i. Task Description** – Permittees shall undertake outreach programs to (a) encourage communities within the Permittee’s jurisdiction to reduce their reliance on pesticides that threaten water quality; (b) encourage public and private landscape irrigation management that minimizes pesticide runoff; and (c) promote appropriate disposal of unused pesticides.
- ii. Implementation** – The Permittees shall conduct each of the following:
 - (1) **Point of Purchase Outreach:** The Permittees shall:
 - Conduct outreach to consumers at the point of purchase;
 - Provide targeted information on proper pesticide use and disposal, potential adverse impacts on water quality, and less toxic methods of pest prevention and control; and
 - Participate in and provide resources for the “Our Water, Our World” program or a functionally-equivalent pesticide use reduction outreach program.
 - (2) **Pest Control Contracting Outreach:** The Permittees shall conduct outreach to residents who use or contract for structural pest control and landscape professionals by (a) explaining the links between pesticide usage and water quality; and (b) providing information about IPM in structural pest management certification programs and landscape professional trainings; and (c) disseminating tips for hiring structural pest control operators and landscape professionals, such as the tips prepared by the University of California Extension IPM Program (UC-IPM).
 - (3) **Outreach to Pest Control Professionals:** The Permittees shall conduct outreach to pest control operators, urging them to promote IPM services to customers and to become IPM-certified by Ecowise Certified or a functionally-equivalent certification program. Permittees are encouraged to work with the Pesticide Applicators Professional Association; the California Association of Pest Control Advisors; DPR; county agricultural commissioners; UC-IPM; BASMAA; EcoWise Certified Program (or functionally equivalent certification program); Bio-integral Resource Center and others to promote IPM to pest control operators.
- iii. Reporting** – In each Annual Report, Permittees shall describe their actions taken in the three outreach categories above. Outreach conducted at the county or regional level shall be described in Annual Reports prepared at that respective level; reiteration in individual Permittee reports is discouraged. Reports shall include a brief description of outreach conducted in each of the three categories, including level of effort, messages and target audience. (The effectiveness of outreach efforts shall be evaluated only once in the Permit term, as required in Provision C.9.f.).

C.9.f. Track and Participate in Relevant Regulatory Processes

- i. Task Description** – The Permittees shall conduct the following activities, which may be done at a county, regional, or state wide level:
 - (1) The Permittees shall track U.S. EPA pesticide evaluation and registration activities as they relate to surface water quality and, when necessary, encourage U.S. EPA to coordinate implementation of the Federal Insecticide, Fungicide, and Rodenticide Act and the CWA and to accommodate water quality concerns within its pesticide registration process;
 - (2) The Permittees shall track DPR pesticide evaluation activities as they relate to surface water quality and, when necessary, encourage DPR to coordinate implementation of the California Food and Agriculture Code with the California Water Code and to accommodate water quality concerns within its pesticide evaluation process;
 - (3) The Permittees shall assemble and submit information (such as monitoring data) as needed to assist DPR and county agricultural commissioners in ensuring that pesticide applications comply with WQS; and
 - (4) As appropriate, the Permittees shall submit comment letters on U.S. EPA and DPR re-registration, re-evaluation, and other actions relating to pesticides of concern for water quality.
- ii. Reporting** – In their Annual Reports, the Permittees shall summarize participation efforts, information submitted, and how regulatory actions were affected. Permittees who contribute to a county, regional, or state wide effort shall submit one report at the county or regional level. Duplicate reporting is discouraged.

C.9.g. Evaluate Implementation of Pesticide Source Control Actions

- i. Task Description** – This task is necessary to gauge how effective the implementation actions taken by Permittees are in (a) achieving TMDL targets and (b) avoiding future pesticide-related toxicity in urban creeks. Once during the permit term, Permittees shall conduct a thoughtful evaluation of their IPM efforts, how effective these efforts appear to be, and how they could be improved.
- ii. Implementation** – The Permittees shall evaluate the effectiveness of the pesticide control measures implemented by their staff and contractors, evaluate attainment of pesticide concentration and toxicity targets for water and sediment from monitoring data (collected by Permittees, research agencies, and/or State agencies), and identify additions and/or improvements to existing control measures needed to attain targets, with an implementation time schedule.
- iii. Reporting** – In their 2019 Annual Reports, the Permittees shall submit this evaluation, which shall include an assessment of the effectiveness of their IPM efforts required in Provisions C.9.a-e and g; a discussion of any improvements

made in these efforts in the preceding five years; and any changes in water quality regarding pesticide toxicity in urban creeks. This evaluation shall also include a brief description of one or more pesticide-related area(s) the Permittee will focus on enhancing during the subsequent permit term. Work conducted at the county or regional level shall be evaluated at that respective level; reiteration in individual Permittee evaluation reports is discouraged.

C.10. Trash Load Reduction

The Permittees shall demonstrate compliance with Discharge Prohibition A.1, for trash discharges, Discharge Prohibition A.2, and trash-related Receiving Water Limitations through the timely implementation of control measures and other actions to reduce trash loads from municipal separate storm sewer systems in accordance with the requirements of this provision. Flood management agencies are not subject to these trash reduction requirements except for continued implementation of requirements for trash full capture systems and Trash Hot Spot cleanups, as specified in subsections C.10.b.i and C.10.c.

C.10.a. Trash Reduction Requirements

Permittees shall implement trash load reduction control actions in accordance with the following schedule and trash generation area management requirements, including mandatory minimum full trash capture systems, to meet the goal of 100 percent trash load reduction or no adverse impact to receiving waters from trash by July 1, 2022.

- i. **Schedule** – Permittees shall reduce trash discharges from 2009 levels, described below, to receiving waters in accordance with the following schedule:

- a. 70 percent by July 1, 2017; and
- b. 80 percent by July 1, 2019.

In addition, Permittees should achieve 60 percent reduction by July 1, 2016. This is not a mandatory deadline; rather, it shall be used as a performance guideline to meet the mandatory July 1, 2017 deadline. Permittees that do not attain the 60 percent performance guideline shall submit documentation of a plan and schedule of implementation of additional trash load reduction control actions that will attain the July 1, 2017 deadline.

- ii. **Trash Generation Area Management** – Permittees shall demonstrate attainment of the C.10.a.i trash discharges percentage-reduction requirements by management of mapped trash generation areas within their jurisdictions delineated on Trash Generation Area Maps included with their Long Term Trash Reduction Plans, submitted in February 2014, in accordance with the requirements and accounting set forth in this provision. The February 2014 maps provide the 2009 trash levels and delineate trash generation areas within Permittees' jurisdictions into the following trash generation rate categories

- Low = less than 5 gal/acre/yr;
- Moderate = 5-10 gal/acre/yr;
- High = 10-50 gal/acre/yr; and
- Very High = greater than 50 gal/acre/yr.

Permittees also designated trash management areas on their February 2014 maps encompassing one or more trash generation areas, within which they will implement trash control actions. Permittees shall have an opportunity to correct and/or revise, based on improved information, the 2009 trash levels and trash generation areas in their February 2014 maps by submitting the correction and/or revision no later than the 2016 Annual Report deadline.

- a. Permittees shall implement trash prevention and control actions, including full trash capture systems or other trash management actions, or combinations of actions, with trash discharge control equivalent to or better than full trash capture systems, to reduce trash generation to a Low trash generation rate or better. Actions equivalent to full trash capture means actions that send no more trash down the storm drain system than a full trash capture device would allow, which is essentially no trash discharge except in very large storm flows. The C.10.a.i percent reductions shall be demonstrated by percent of 2009 Very High, High, and Moderate trash generation areas reduced to lower trash generation categories or Low trash generation by the C.10.a.i mandatory deadlines.
- b. Permittees shall ensure that lands that they do not own or operate, but that are plumbed directly to their storm drain systems in Very High, High, and Moderate trash generation areas are equipped with full trash capture systems or are managed with trash discharge control actions equivalent to or better than full trash capture systems. The efficacy of the latter shall be assessed with visual assessments in accordance with C.10.b.ii. If there is a full trash capture device downstream of these lands, no other trash control is required. Permittees shall map the location, or otherwise record the location, of all such lands greater than 10,000 ft² that are plumbed directly to their storm drain systems by July 1, 2018, including the trash control status of these areas. This information shall be retained by the Permittees for inspection upon request.
- iii. Mandatory Minimum Full Trash Capture Systems** - Permittees shall install and maintain a mandatory minimum number of full trash capture devices, to treat runoff from an area equivalent to 30 percent of retail/wholesale land area, as documented by the Association of Bay Area Governments, which drains to the storm drain system within their jurisdictions. A city Permittee with a population less than 12,000 and retail/wholesale land less than 40 acres, or a population less than 2,000, is exempt from this full trash capture requirement. Table 2 in Attachment E contains the minimum amount of drainage areas that must be treated with full trash capture devices by each city or county Permittee, and the minimum number of trash capture devices required to be installed and maintained by flood management agency Permittees.

A full capture system is any single device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate resulting from a one-year, one-hour, storm in the sub-drainage area or designed to carry at least the same flow as the storm drain connected to the inlet. The device(s) must also have a trash reservoir large enough to contain a reasonable amount of trash safely without overflowing trash into the overflow outlet between maintenance events. Types of systems certified by the State Water Resources Control Board are deemed full capture systems. A stormwater treatment facility implemented in accordance with Provision C.3 is also deemed a full capture system if the facility, including its maintenance prevents the discharge of trash to the downstream MS4 and receiving waters

and discharge points from the facility, including overflows, are appropriately screened or otherwise configured to meet the full trash capture screening specification for storm flows up to the full trash capture one year, one hour storm hydraulic specification (C.10.a.iii.).

C.10.b. Demonstration of Trash Reduction Outcomes

- i. Full Trash Capture Systems** – Permittees shall maintain, and provide for inspection and review upon request, documentation of the design, operation, and maintenance of each of their full trash capture systems, including the mapped location and drainage area served by each system.
 - a. Maintenance** – The maintenance of each full capture device shall be adequate to prevent plugging, including plugging of the 5 mm screen leading to trash overflow and bypass, flooding, or a full condition of the device’s trash reservoir causing bypassing of trash. All full trash capture devices shall be inspected and maintained at least once per year. All such devices in high or very high trash generation areas shall be inspected at least two times per year, with the inspections spaced at least three months or more apart. If this frequency of inspection is found excessive after two inspections, the inspection frequency can be reduced to once per year.

If any such device is found to have a plugged or blinded screen or is greater than 50 percent full of trash during a maintenance event, the maintenance frequency shall be increased so that the device is neither plugged nor more than half full of trash at the next maintenance event.
 - b. Maintenance Records** – Permittees shall retain device specific maintenance records, including, at a minimum: the date(s) of maintenance, the capacity condition of the device at the time of maintenance (full and overflowing or with storage capacity remaining), any special problems such as flooding, screen blinding or plugging from leaves, plastic bags, or other debris causing overflow, damage reducing function, or other negative conditions. A summary of this information shall be reported in each Annual Report which may be limited to the number of full capture devices maintained that exhibited a plugged, full or overflowing condition upon maintenance.
 - c. Certification** – Permittees shall certify annually that each of their full trash capture systems is operated and maintained to meet full trash capture system requirements. Drainage areas served by an adequately maintained full trash capture system will be considered equivalent to or better than a Low trash generation area.
- ii. Other Trash Management Actions** – Permittees shall maintain, and provide for inspection and review upon request, documentation of non-full trash capture system trash control actions that verifies implementation of each action. Permittees shall also conduct assessment of the action that verifies effectiveness of the action or combination of actions and maintain, and provide for inspection and review upon request, documentation of assessments.

- a. **Implementation Documentation** – Permittees shall maintain documentation of trash control actions that describes each action or combination of actions, the level of implementation, the timing and frequency of implementation, standard operating procedures if applicable, location(s) of implementation actions including mapped location(s) and drainage area(s) affected or description of areal extent, tracking and enforcement procedures if applicable, and other information relevant to effective implementation of the action or combination of actions.
- b. **Visual Assessment of Outcomes of Other Trash Management Actions** – Permittees shall conduct visual on-land assessment, including photo documentation, or other acceptable assessment method (see C.10.b.ii.b.(iv.)), of each trash generation area within which it is implementing other trash management actions or combination of actions other than full trash capture, to determine or verify the effectiveness of the action or combination of actions. Permittees may assess and account for one or more trash generation areas in a single trash management area within which a control action or combination of control actions is implemented. The visual on-land assessment method used shall meet or exceed the following criteria:
 - (i) Conduct observations within a trash management area of the sidewalk, curb and gutter, or locations associated with trash generation sources.
 - (ii) Conduct observations at randomly selected locations covering at least ten percent of a trash management area's street miles; or conduct observations at strategic locations with justification they are representative of trash generation in the management area and they will represent the effectiveness of the control action(s) implemented or planned in the management area.
 - (iii) Conduct observations at a frequency consistent with known or estimated trash generation rate(s) within a trash management area and the time frequency of implementation of the control action(s) implemented or planned in the management area. Conduct observations for effectiveness approximately at the halfway point of the interval between instances of recurring trash control actions such as street sweeping and on-land cleanup.
 - (iv) Permittees may put forth substantive and credible evidence that certain management actions or sets of management actions when performed to a specified performance standard yield a certain trash reduction outcome reliably. Such a proposal shall be made to the Executive Officer as a submittal separate from any other submittals or reports. If this evidence is accepted by the Executive Officer, the Permittees may claim a similar trash reduction outcome by demonstrating that they have performed these trash reduction actions within certain trash management areas to the same performance standard accepted by the Executive Officer.
- iii. **Percentage Discharge Reduction** – Percentage discharge reduction from 2009 from Very High generation areas reduced to High, Moderate, and Low, High

generation areas reduced to Moderate and Low, and Moderate trash generation areas reduced to Low trash generation category to meet the required total percent reduction (%_{Reduction}) shall be calculated based on the following formula:

$$\% \text{ Reduction} = 100 \left[\frac{(12A_{\text{VH}(2009)} + 4A_{\text{H}(2009)} + A_{\text{M}(2009)}) - (12A_{\text{VH}} + 4A_{\text{H}} + A_{\text{M}})}{(12A_{\text{VH}2009} + 4A_{\text{H}2009} + A_{\text{M}2009})} \right]$$

where:

- $A_{\text{VH}(2009)}$ = total amount of the 2009 very high trash generation category jurisdictional area
- $A_{\text{H}(2009)}$ = total amount of the 2009 high trash generation category jurisdictional area
- $A_{\text{M}(2009)}$ = total amount of the 2009 moderate trash generation category jurisdictional area
- A_{VH} = total amount of very high trash generation category jurisdictional area in the reporting year
- A_{H} = total amount of high trash generation category jurisdictional area in the reporting year
- A_{M} = total amount of moderate trash generation category jurisdictional area in the reporting year
- 12 = Very High to Moderate weighing ratio
- 4 = High to Moderate weighing ratio
- 100 = fraction to percentage conversion factor

iv. Source Control – Permittee jurisdiction-wide actions to reduce trash at the source, particularly persistent trash items, may be valued toward trash load reduction compliance by up to ten percent load reduction total for all such actions. To claim a load percentage reduction value, Permittees must provide substantive and credible evidence that these actions reduce trash by the claimed value. A Permittee may reference studies in other jurisdictions if it provides evidence that the implementation of source control in its jurisdiction is similarly implemented as the source control assessed in the reference studies.

v. Receiving Water Monitoring – Permittees shall conduct receiving water monitoring and develop receiving water monitoring tools and protocols and a monitoring program designed, to the extent possible, to answer the following questions:

- Have a Permittee’s trash control actions effectively prevented trash within a Permittee’s jurisdiction from discharging into receiving water(s)?
- Is trash present in receiving water(s), including transport from one receiving water to another, e.g., from a creek to a San Francisco Bay segment, at levels that may cause adverse water quality impacts?
- Are trash discharges from a Permittee’s jurisdiction causing or contributing to adverse trash impacts in receiving water(s)?
- Are there sources outside of a Permittee’s jurisdiction that are causing or contributing to adverse trash impacts in receiving water(s)?

The monitoring tools and protocols shall include direct measurements and/or observations of trash in receiving water(s), or in scenarios where direct measurements or observations are not feasible, surrogates for trash in receiving waters, such as measurement or observations of trash on stream banks or shorelines.

- a. **Development and Testing Plan** – Permittees shall submit a plan acceptable to the Executive Officer by July 1, 2017, to develop and test a proposed receiving water monitoring program that includes the following:
- (i) Description of the tools and protocols;
 - (ii) Description of discharge and receiving water scenarios, which will be considered, that accounts for the various receiving waters and watershed, community, and drainage characteristics within Permittees' jurisdictions that affect the discharge of trash and its fate and effect in receiving water(s);
 - (iii) Description of factors, in addition to those in C.10.b.v.a.(ii), that will be considered and evaluated to determine scenarios and spatial and temporal representativeness;
 - (iv) Identification of sites, representative of all the Permittees and discharge and receiving water scenarios, that will be monitored during this permit term;
 - (v) Development of a system to manage and access monitoring results;
 - (vi) Opportunity for input and participation by interested parties;
 - (vii) Scientific peer review of the tools and protocols and testing results; and
 - (viii) Schedule for development and testing; with monitoring at representative sites starting no later than October 2017.

If the Permittees conduct this work through an independent third party, approved by the Executive Officer, the Plan may be submitted by July 2018, with monitoring to begin no later than October 2018.

- b. **Report and Proposed Monitoring Program** – Permittees shall report progress in the 2018 Annual Report, and submit a preliminary report by July 1, 2019 and a final report by July 1, 2020 on the proposed trash receiving water monitoring program. The progress report is not required if the Permittees conduct this work through an independent third party, approved by the Executive Officer, that provides input and participation by interested parties and scientific peer review of the tools and protocols and testing results and proposed receiving monitoring program.

C.10.c. Trash Hot Spot Selection and Cleanup

Trash Hot Spots in receiving waters shall be cleaned annually to achieve the multiple benefits of abatement of impacts and to learn more about the sources and transport routes of trash loading.

- i. **Trash Hot Spot Cleanup and Definition** – The Permittees shall clean selected Trash Hot Spots to a level of “no visual impact” at least one time per year for the

term of the permit. Trash Hot Spots shall be sections of creek or shoreline significantly impacted by trash of at least 100 yards of creek length or 200 yards of shoreline length.

- ii. **Trash Hot Spot Selection** – Permittees shall maintain the same number of trash hot spots identified in the previous permit term, which are included in Attachment E. Permittees may select new trash hot spot locations if past locations are no longer trash hotspots or if other locations may better align with trash management areas.
- iii. **Trash Hot Spot Assessments** – The Permittees shall quantify the volume of material removed from each Trash Hot Spot cleanup and attempt to identify sources to the extent readily feasible. Documentation of the cleanup activity to be retained by the Permittee shall include the trash condition before and after cleanup of the entire hot spot using photo documentation with a minimum of one photo per 100 feet of hot spot length and the total volume of trash and litter removed from the hot spot. Permittees shall report the volume removed for the most recent five years of hot spot cleanup in each Annual Report, or if a new trash hot spot location is selected, Permittees shall report the volume removed for the years of cleanup of that hotspot.

C.10.d. Trash Load Reduction Plans

Each Permittee shall maintain, and provide for inspection and review upon request, a Trash Load Reduction Plan, including an implementation schedule to meet the C.10.a Trash Load Reduction requirements. A summary of any new revisions to the Plan shall be included in the Annual Report. The Plan shall describe trash load reduction control actions being implemented or planned and the trash generation areas or trash management areas where the actions are or will be implemented, including jurisdiction-wide actions, such as source control ordinances

The Plans may include actions to control sources outside of the Permittee's jurisdiction that are causing or contributing to adverse trash impacts in the receiving water(s). Permittees who choose to implement such control actions may account for them towards meeting the C.10.a Trash Load Reduction requirements as long as they can demonstrate the controls will be sustained and they quantify the sustained load reduction benefit relative to control actions in the trash generation areas or trash management areas in their jurisdiction that drained to the affected receiving water.

C.10.e. Optional Trash Load Reduction Offset Opportunities

- i. **Additional Creek and Shoreline Cleanup** – A Permittee may offset part of its provision C.10.a trash load percent reduction requirement by conducting additional cleanup of creek and shoreline areas beyond trash hot spot cleanups required by C.10.c if the additional cleanup efforts are conducted at a frequency of at least twice per year and sufficient to demonstrate sustained improvement of the creek or shoreline area. The maximum offset that may be claimed is ten percent.

A Permittee may claim a load reduction offset of one percent for each total of trash volume removed from additional cleanups that is three and a third percent

for the 2016 performance guideline and 2017 mandatory trash load reduction deadline, and ten percent for the 2019 mandatory trash load reduction deadline, of the Permittee's 2009 trash load volume estimates, based on its trash generation maps and average categorical trash generation rates (see C.10.a.ii), in accordance with the following formula:

$$1\% \text{ Reduction Offset (Volume)} = (12 A_{\text{VH}(2009)} + 4 A_{\text{H}(2009)} + A_{\text{M}(2009)}) \text{ OF}$$

where:

- $A_{\text{VH}(2009)}$ = total amount of 2009 very high trash generation category jurisdictional area
- $A_{\text{H}(2009)}$ = total amount of 2009 high trash generation category jurisdictional area
- $A_{\text{M}(2009)}$ = total amount of 2009 moderate trash generation category jurisdictional area
- 12 = Very High to Moderate weighing ratio
- 4 = High to Moderate weighing ratio
- OF = offset factor equal to (7.5 x 0.033) for the 2016 performance guideline and 2017 mandatory trash load reduction deadline, where 7.5 is the conversion from acres to gallons based on trash generation rates and 0.033 is the three to one offset ratio, or (7.5 x 0.1) for the 2019 mandatory trash load reduction deadline, where 7.5 is the conversion from acres to gallons based on trash generation rates and 0.1 is the ten to one offset ratio.

ii. Direct Trash Discharge Controls – A Permittee may offset an additional part of its provision C.10.a trash load percent reduction requirement by implementing a comprehensive plan approved by the Executive Officer for control of direct discharges of trash to receiving waters from non-storm drain system sources. The maximum offset that may be claimed is fifteen percent using the C.10.e.i formula. The plan shall be submitted not later than February 1 of the first year in which the offset will be reported in the following Annual Report and shall include the following:

- a. description of sources of the directly discharged trash;
- b. description of control actions that will be implemented during the permit term to prevent or reduce direct discharge trash loads in a systematic and comprehensive manner;
- c. map of the affected receiving water area and associated watershed; and
- d. description of how effectiveness of controls will be assessed, including documentation of controls, quantification of trash volume controlled, and assessment of resulting improvements to receiving water conditions.

C.10.f. Reporting

Each Permittee shall provide the following in each Annual Report:

- i.** A summary of trash control actions within each trash management area, including the types of actions, levels of implementation, areal extent of implementation, and whether the actions are ongoing or new, including initiation date.
- ii.** Upon request by the Executive Officer, an updated trash generation area map or maps, which include trash management areas, including the locations and associated drainage areas and of full trash capture systems and other trash control actions, and the location of Trash Hot Spots, with highlight or other indication of any revisions or changes from the previous year map(s). These maps can be used to illustrate progress toward achieving the trash reduction requirements in C.10.a.i.
- iii.** Should a Permittee correct and/or revise its 2009 trash generation map submitted in February 2014, the corrected or revised 2009 trash generation map shall be submitted in the 2016 Annual Report, if the Permittee has not already submitted the corrected or revised map. Certification that each of its full trash capture systems is operated and maintained to meet full trash capture system requirements; a description of any systems that did not meet full trash capture system requirements (e.g., due to plugging or overflowing); and any corrective actions taken.
- iv.** An accounting of its non-full trash capture system trash control actions assessments by providing a summary description of assessments in each of its trash management areas, including the number and dates of observations.
- v.** An accounting of progress toward or attainment of C.10.a.i trash discharge reduction performance guidelines and mandatory deadlines using the C.10.a.ii trash generation area mapping methodology and formula.
 - a.** If a Permittee cannot demonstrate attainment of the 2016 performance guideline, it shall submit a detailed plan and schedule of implementation of additional trash load reduction control actions that will attain the 2017 mandatory deadline.
 - b.** If a Permittee cannot demonstrate attainment of the 2017 or 2019 mandatory trash load reduction deadline, it shall submit a report of non-compliance with the associated Annual Report, or in advance of the Annual Report, that describes actions to comply with the mandatory reduction deadline in a timely manner. The report shall include a plan and schedule for implementation of full trash capture systems sufficient to attain the required reduction. A Permittee may submit a plan and schedule for implementation of other trash management actions to attain the required reduction in an area where implementation of a full trash capture system is not feasible. In such cases, the report shall include identification of the area and documentation of the basis of the Permittee's determination that implementation of a full trash capture system is not feasible.
- vi.** In the 2018 Annual Report, progress on development and testing of the receiving water monitoring program.

- vii.** The volume removed for the most recent five years of hot spot cleanup for each of its trash hot spots, or for the years of cleanup if a new trash hot spot location has been selected.
- viii.** For Permittees claiming a C.10.e.i offset, based on additional cleanup of creek and shoreline areas, a summary description of the additional cleanup actions.
- ix.** For Permittees claiming a C.10.e.ii offset, based on non-storm drain system trash controls, a summary description of control actions receiving water assessment results, quantification of trash volume controlled, and assessment of resulting improvements in receiving water condition, the claimed offset and documentation of information used in the C.10.e.i formula.

C.11. Mercury Controls

The Permittees shall implement the following control program for mercury. The Permittees shall perform the control measures (source control, treatment control, and pollution prevention strategies) and report on those control measures according to the provisions below. The provisions implement the urban runoff requirements of the San Francisco Bay and Guadalupe River Watershed mercury TMDLs and reduce mercury loads to make substantial progress toward achieving the urban runoff mercury load allocations established for the TMDLs. The aggregate, regionwide, urban runoff wasteload allocation from the San Francisco Bay mercury TMDL is 82 kg/yr. The TMDL implementation plan calls for attainment of the allocation by February 2028 and, as a way to measure progress, attainment of an interim loading milestone by February 2018 of 120 kg/yr, halfway between the 2003 estimated load, 160 kg/yr, and the aggregate allocation. The Permittees may comply with any requirement of this provision through a collaborative effort.

C.11.a. Implement Control Measures to Achieve Mercury Load Reductions

- i. Task Description** – Permittees shall implement mercury source and treatment control measures and pollution prevention strategies to reduce mercury loads throughout the area covered by this Permit (permit-area).
- ii. Implementation level** – To comply with this provision element, Permittees shall:
 - (1) Identify the watersheds or portions of watersheds (management areas) in which mercury control measures are currently being implemented and those in which new control measures will be implemented during the term of this Permit (many or most may be the same watersheds as those identified for C.12.a.ii(1));
 - (2) Identify the control measures that are currently being implemented and those that will be implemented in each watershed and management area (may be the same as those identified for C.12.a.ii(2));
 - (3) Submit a schedule of control measure implementation; and
 - (4) Implement mercury source and treatment control measures and pollution prevention strategies and quantify mercury load reductions achieved by using the accounting methods established according to provision C.11.b.
- iii. Reporting**
 - (1) The Permittees shall report by April 1, 2016, progress toward developing a list of the watersheds and management areas where mercury control measures are currently being implemented and those in which control measures will be implemented (C.11.a.ii(1)) during the term of this Permit as well as the monitoring data and other information used to select these watersheds and management areas.

- (2) The Permittees shall report in their 2016 Annual Report the list of watersheds and management areas where control measures are currently being implemented or will be implemented during the term of the Permit (C.11.a.ii(1)) along with the specific control measures (C.11.a.ii(2)) that are currently being implemented and those that will be implemented in these watersheds and management areas and an implementation schedule (C.11.a.ii(3)) for these control measures. In addition to the list of watersheds and management areas, this report shall include:
 - a. The number, type, and locations and/or frequency (if applicable) of control measures;
 - b. The description, scope, and start date of pollution prevention measures;
 - c. For each structural control and non-structural BMP, interim implementation progress milestones (e.g., construction milestones for structural BMPs or other relevant implementation milestones for structural and non-structural BMPs) and a schedule for milestone achievement; and
 - d. Clear statements of the roles and responsibilities of each participating Permittee for implementation of pollution prevention or control measures identified under C.11.a.ii(2).
- (3) Beginning with the 2017 Annual Report and continuing in all Annual Reports, Permittees shall update all the information required under C.11.a.iii(2) as necessary to account for new control measures implemented, but not described, in the 2016 Annual Report.

C.11.b. Assess Mercury Load Reductions from Stormwater

- i. **Task Description** – The Permittees shall develop and implement an assessment methodology and data collection program to quantify in a technically sound manner mercury loads reduced through implementation of pollution prevention, source control, and treatment control measures, including mercury source control, stormwater treatment, green infrastructure, and other measures. The Permittees shall use the assessment methodology to demonstrate progress toward achieving the load reductions required in this Permit term and the program area wasteload allocations.

A reasonable and technically sound load reduction accounting system is described in the Fact Sheet and is based on information submitted by the Permittees in the January 2014 Integrated Monitoring Report. This task consists of documenting the method described in the Fact Sheet or any alternative methodology, updating and refining the accounting system to account for new information, justifying assumptions, analytical methods, sampling schemes and parameters used to quantify the load reduction for each type of control measure, and indicating what information will be collected and submitted to confirm the calculated load reduction for each control measure implemented.

ii. Implementation Level – The Permittees shall adequately quantify the mercury load reductions achieved through implementing pollution prevention, source control, and treatment control efforts.

iii. Reporting

- (1) In their 2016 Annual Report the Permittees shall submit, for Executive Officer approval, the assessment methodology and data collection program required in C.11.b.i.
- (2) Beginning with the 2017 Annual Report, Permittees shall report annually the loads reduced using the default (from Fact Sheet) or alternative approved assessment methodology to demonstrate cumulative mercury load reduced from each control measure implemented since the beginning of the Permit term. Permittees shall submit all supporting data and information necessary to substantiate the load reduction estimates, including appropriate reference to the control measures described in the reporting required under C.11.a.
- (3) In their 2018 and subsequent Annual Reports, the Permittees shall submit, for Executive Officer approval, any refinements, if necessary, to the measurement and estimation methodologies to assess mercury load reductions in the subsequent permit.

C.11.c. Plan and Implement Green Infrastructure to reduce mercury loads

i. Task Description – Permittees shall implement green infrastructure projects during the term of the Permit to achieve the mercury load reductions performance criteria in Table 11.1. Green infrastructure projects on both public and private land can serve to achieve this load reduction requirement. Additionally, Permittees shall prepare a reasonable assurance analysis (see below and Fact Sheet) to demonstrate quantitatively that mercury load reductions of at least 10 kg/yr will be achieved by 2040 through implementation of green infrastructure throughout the permit-area.

ii. Implementation Level

- (1) The Permittees shall implement sufficient green infrastructure projects so that mercury loads are collectively reduced by 48 g/yr by June 30, 2020, which shall be extended to December 31, 2020, if the Permittees provide documentation that control measures that will attain the load reduction will be implemented by December 31, 2020. Permittees shall demonstrate achievement of these load reductions by using the accounting methods approved under provision C.11.b.iii(1). Load reductions from green infrastructure projects implemented prior to the effective date of this Permit may be counted toward the required green infrastructure reductions of this Permit term if these projects were established and implemented during the Previous Permit term, but load reductions from the activity were not realized or credited during the Previous Permit term.

The Permittees may meet the load reduction as a group. The load reduction requirements summed over all Permittees within each county are set forth in Table 11.1. If neither the permit-area-wide total load reduction nor the county-specific load reduction is achieved, Permittees shall achieve load reductions consistent with their share of the county total. The individual Permittee share of the county load reduction is the proportion of county population in each municipality.

If all the Permittees in a county wish to use an alternative method of distributing the county load reductions, these Permittees shall report through their countywide stormwater programs on their alternative method (if different from default population-based method) for assigning Permittee-specific load fractions in the 2017 Annual Report. This can be determined by the Permittees within the counties and may be different from one county to the next, but all Permittees within a county shall use the same method of distributing the county load reductions. Any acceptable alternative load reduction criteria must be approved through an amendment of this Permit.

Table 11.1 Mercury Load Reduction Performance Criteria via Green Infrastructure Implementation by County

County Permittees	Mercury Load Reduction (g/yr) by June 30, 2020, through green infrastructure
Alameda Permittees	15
Contra Costa Permittees	9
San Mateo Permittees	6
Santa Clara Permittees	16
Solano Permittees: Suisun City, Vallejo, Fairfield	2
Totals	48

- (2) Permittees shall prepare a reasonable assurance analysis of future mercury load reductions by doing the following:
 - a. Quantify the relationship between areal extent of green infrastructure implementation and mercury load reductions. This quantification should take into consideration the scale of contamination of the treated area as well as the pollutant removal effectiveness of likely green infrastructure strategies.
 - b. Estimate the amount and characteristics of land area that will be treated through green infrastructure by 2020, 2030, and 2040.
 - c. Estimate the amount of mercury load reductions that will result from green infrastructure implementation by 2020, 2030, and 2040.

- d. Quantitatively demonstrate that mercury reductions of at least 10 kg/yr will be realized by 2040 through implementation of green infrastructure projects.
- e. Ensure that the calculation methods, models, model inputs, and modeling assumptions used to fulfill C.11.c.ii(2)(a-d) have been validated through a peer review process.

iii. Reporting

- (1) The Permittees shall submit in their 2018 Annual Report, as part of reporting for C.11.b.iii(2), the quantitative relationship between green infrastructure implementation and mercury load reductions. This submittal shall include all data used and a full description of models and model inputs relied on to establish this relationship.
- (2) The Permittees shall submit in their 2020 Annual Report an estimate of the amount and characteristics of land area that will be treated through green infrastructure implementation by 2020, 2030, and 2040. This submittal shall include all data used and a full description of models and model inputs relied on to generate this estimate.
- (3) The Permittees shall submit in their 2020 Annual Report a reasonable assurance analysis to demonstrate quantitatively that mercury reductions of at least 10 kg/yr will be realized by 2040 through implementation of green infrastructure projects. This submittal shall include all data used and a full description of models and model inputs relied on to make the demonstration and documentation of peer review of the reasonable assurance analysis.
- (4) The Permittees shall submit as part of reporting for C.11.b.iii(2), beginning with their 2019 Annual Report, an estimate of the amount of mercury load reductions resulting from green infrastructure implementation during the term of the Permit. This submittal shall include all data used and a full description of models and model inputs relied on to generate this estimate.
- (5) All Permittees in a county may submit, in the 2017 Annual Report, an alternative (different from the population-based default described in C.11.c.ii(1)) and supporting information to derive Permittee-specific proportions of load reduction criteria.

C.11.d. Prepare Implementation Plan and Schedule to Achieve TMDL Allocations

- i. **Task Description** – Permittees shall prepare a plan and schedule for mercury control measure implementation and reasonable assurance analysis demonstrating that sufficient control measures will be implemented to attain the mercury TMDL wasteload allocations by 2028. This plan may share many elements of a similar plan developed for PCBs according to Provision C.12.d.

ii. Implementation level – Permittees shall prepare a mercury control measure implementation plan and corresponding reasonable assurance analysis that demonstrates quantitatively that the plan will result in mercury load reductions sufficient to attain the mercury TMDL wasteload allocations by 2028. The plan must:

- (1) Identify all technically and economically feasible mercury control measures (including green infrastructure projects) to be implemented;
- (2) Include a schedule according to which these technically and economically feasible control measures will be fully implemented; and
- (3) Provide an evaluation and quantification of the mercury load reduction of such measures as well as an evaluation of costs, control measure efficiency and significant environmental impacts resulting from their implementation.

iii. Reporting

Permittees shall submit the plan and schedule in the 2020 Annual Report.

C.11.e. Implement a Risk Reduction Program

i. Task Description – The Permittees shall conduct an ongoing risk reduction program to address public health impacts of mercury in San Francisco Bay/Delta fish. The fish risk reduction program shall take actions to reduce actual and potential health risks in those people and communities most likely to consume San Francisco Bay-caught fish, such as subsistence fishers and their families. The risk reduction framework developed in the Previous Permit term, which funded community-based organizations to develop and deliver appropriate communications to appropriately targeted individuals and communities, is an appropriate approach.

ii. Implementation Level

- (1) At a minimum, Permittees shall conduct or cause to be conducted an ongoing risk reduction program with the potential to reach 3000 individuals annually who are likely consumers of San Francisco Bay-caught fish. Permittees are encouraged to collaborate with San Francisco Bay industrial and wastewater discharger agencies in meeting this requirement.
- (2) In year four of the permit term, Permittees shall evaluate the effectiveness of their risk reduction program.

iii. Reporting – The Permittees shall report on the status of the risk reduction program in each of their Annual Reports, including a brief description of actions taken, an estimate of the number of people reached, and why these people are deemed likely to consume Bay fish. The Permittees shall report the findings of the effectiveness evaluation of their risk reduction program in their 2020 Annual Report.

C.12. Polychlorinated Biphenyls (PCBs) Controls

The Permittees shall implement the following control program for PCBs. The Permittees shall implement PCBs control measures (source control, treatment control, and pollution prevention strategies) in areas where benefits are most likely to accrue (focused implementation) and report on those control measures according to the provisions below. The provisions implement the urban runoff requirements of the PCBs TMDL. Permittees shall reduce PCBs loads by a specified amount during the term of the Permit, thereby making substantial progress toward achieving the urban runoff PCBs wasteload allocation in the Basin Plan. The allocation, on an aggregate and regionwide basis, is 2 kg/yr (1.6 kg/yr allocated to Permittees) to be achieved by March 2030. This wasteload allocation represents a load reduction from all urban runoff sources to the Bay of approximately 18 kg/yr (14.4 kg/yr from Permittees) compared to loads estimated using data collected in 2003. The Permittees may comply with any requirement of this Provision through a collaborative effort.

C.12.a. Implement Control Measures to Achieve PCBs Load Reductions.

- i. Task Description** – Permittees shall implement PCBs source and treatment control measures and pollution prevention strategies to achieve PCBs load reductions in Table 12.1 throughout the area covered by this Permit (permit-area).
- ii. Implementation level** –To comply with this provision element, Permittees shall:
 - (1) Identify the watersheds or portions of watersheds (management areas) in which PCBs control measures are currently being implemented and those in which new control measures will be implemented during the term of this permit;
 - (2) Identify the control measures that are currently being implemented and those that will be implemented in each watershed and management area;
 - (3) Submit a schedule of control measure implementation; and
 - (4) Implement sufficient control measures to achieve the permit-area-wide reduction stated below or the county-specific load reduction performance criteria shown in Table 12.1. The Permittees shall demonstrate achievement of these load reductions as required in provision C.12.b. Load reductions from control measures implemented prior to the effective date of this Permit may be counted toward the required reductions of this Permit term if these control measures were established or implemented during the Previous Permit term, but load reductions from the activity were not realized or credited during the Previous Permit term (e.g., they were implemented after the 2014 Integrated Monitoring Report was submitted).

For all Permittees combined, these county-specific average annual PCBs load reduction performance criteria shall total 0.5 kg/yr by June 30, 2018, and 3.0 kg/yr by June 30, 2020. The June 30, 2020, deadline shall be extended to December 31, 2020, if the Permittees provide documentation that control measures that will attain the load reduction will be implemented by December 31, 2020. The Fact Sheet describes the amount of PCBs load reduction benefit associated with implementing a number of control measures.

The Permittees may meet the load reductions as a group. The load reduction requirements summed over all Permittees within each county are set forth in Table 12.1. If neither the permit-area-wide total load reduction criteria nor the county-specific load reduction criterion is achieved, Permittees shall achieve load reductions consistent with their share of the county total. The individual Permittee share of the county load reduction performance criteria is the proportion of county population in each municipality.

If all the Permittees in a county wish to use an alternative method of distributing the county load reductions, these Permittees shall report through their countywide stormwater programs on their alternative method (if different from default population-based method) for assigning Permittee-specific load fractions in the 2017 Annual Report. This can be determined by the Permittees within the counties and may be different from one county to the next, but all Permittees within a county shall use the same method of distributing the county load reductions. Any acceptable alternative load reduction criteria must be approved through an amendment of this Permit.

Table 12.1 PCBs Load Reductions Performance Criteria by County

County	PCBs load reduction (g/yr) by June 30, 2018	PCBs Load Reduction (g/yr) by June 30, 2020
Alameda Permittees	160	940
Contra Costa Permittees	90	560
San Mateo Permittees	60	370
Santa Clara Permittees	160	940
Solano Permittees: Suisun City, Vallejo, Fairfield	30	190
Totals	500	3000

iii. Reporting

- (1) The Permittees shall report by April 1, 2016, progress toward developing a list of the watersheds and management areas where PCBs control measures are currently being implemented and those in which control measures will be implemented (C.12.a.ii(1)) during the term of this Permit as well as the monitoring data and other information used to select these watersheds and management areas. This list should include watersheds containing contaminated sites referred to the Water Board as well.
- (2) The Permittees shall report in their 2016 Annual Report the list of watersheds and management areas where control measures are currently being implemented or will be implemented during the term of the Permit (C.12.a.ii(1)) along with the specific control measures (C.12.a.ii(2)) that are currently being implemented and those that will be implemented in these watersheds and management areas

and an implementation schedule (C.12.a.ii(3)) for these control measures. In addition to the list of watersheds and management areas, this report shall include:

- a. The number, type, and locations and/or frequency (if applicable) of control measures;
 - b. A cumulative listing of all potentially PCB-contaminated sites Permittees have discovered and referred to the Water Board to date, with a brief summary description of each site and where to obtain further information;
 - c. The description, scope, and start date, of PCBs control measures;
 - d. For each structural control and non-structural BMP, interim implementation progress milestones (e.g., construction milestones for structural controls or other relevant implementation milestones for structural controls and non-structural BMPs) and a schedule for milestone achievement; and
 - e. Clear statements of the roles and responsibilities of each participating Permittee for implementation of pollution prevention or control measures identified under C.12.a.ii(2).
- (3) Beginning with the 2017 Annual Report and continuing in all Annual Reports, Permittees shall update all the information required under C.12.a.iii(2) as necessary to account for new control measures implemented but not described in the 2016 Annual Report.
 - (4) All Permittees in a county may submit, in the 2017 Annual Report, an alternative (different from the default described in C.12.a.ii(4)) and supporting information to derive Permittee-specific proportions of load reduction criteria.

C.12.b. Assess PCBs Load Reductions from Stormwater

- i. Task Description** – The Permittees shall develop, document, and implement an assessment methodology and data collection program to quantify in a technically sound manner PCBs loads reduced through implementation of pollution prevention, source control, and treatment control measures, including PCBs source control, stormwater treatment, green infrastructure and other measures. The Permittees shall use the assessment methodology to demonstrate progress toward achieving the load reductions required in this Permit term and the program area wasteload allocations.

A reasonable and technically sound load reduction accounting system is described in the Fact Sheet and is based on information submitted by Permittees in the January 2014 Integrated Monitoring Report. This task consists of documenting the method described in the Fact Sheet or any alternative methodology, updating and refining the accounting system to account for new information, justifying assumptions, analytical methods, sampling schemes and parameters used to quantify the load reduction for each type of control measure, and indicating what information will be collected and submitted to confirm the calculated load reduction for each unit of activity.

- ii. Implementation Level** – The Permittees shall adequately quantify the PCBs load reductions achieved through all the pollution prevention, source control, and

treatment control measures Permittees will implement in this Permit term, except for measures to manage PCB-containing materials and wastes during building demolitions (C.12.f).

For this Permit term, the Permittees will receive a total of 2000 g/yr (2 kg/yr) PCBs load reduction value if they have developed and implemented effective protocols for managing PCB-containing materials during demolition so that PCBs do not drain into the MS4 as required in provision C.12.f. The 2000 g/yr PCBs load reduction value shall be in furtherance of meeting the June 30, 2020, 3000 g/yr requirement in Table 12.1.

The Permittee-specific portion of the 2000 g/yr PCBs load reduction value shall be based on the proportion of county population in each municipality. If all the Permittees in a county wish to use an alternative method of distributing the county load reductions for managing PCB-containing materials during demolition, these Permittees shall report through their countywide stormwater programs on their alternative method (if different from default population-based method) for assigning Permittee-specific load fractions in the 2019 Annual Report. This can be determined by the Permittees within the counties and may be different from one county to the next, but all Permittees within a county shall use the same method of distributing the county load reductions. Any acceptable alternative load reduction criteria must be approved through an amendment of this Permit.

iii. Reporting

- (1) In their 2016 Annual Report the Permittees shall submit for approval by the Executive Officer the assessment methodology and data collection program required in C.12.b.i. and described in C.12.b.ii.
- (2) Beginning with the 2017 Annual Report, Permittees shall report annually the loads reduced using the default (from the Fact Sheet) or alternative approved assessment methodology to demonstrate cumulative PCBs load reduced from each control measure implemented since the beginning of the Permit term. Permittees shall submit all supporting data and information necessary to substantiate the load reduction estimates, including appropriate reference to the control measures described in the reporting required under C.12.a.
- (3) In their 2018 and subsequent Annual Reports, the Permittees shall submit, for Executive Officer approval, any refinements, if necessary, to the measurement and estimation methodologies to assess PCBs load reductions in the subsequent Permit.
- (4) All Permittees in a county may submit, in the 2019 Annual Report, an alternative (different from the default population-based method) and supporting information to derive Permittee-specific shares of load reduction value associated with implementation of C.12.f.

C.12.c. Plan and Implement Green Infrastructure to reduce PCBs loads

- i. **Task Description** – Permittees shall implement green infrastructure projects during the term of the Permit to achieve PCBs load reduction performance criteria in Table

12.2 in furtherance of meeting the 3000 g/year load reduction criteria required in C.12.a.ii.(4) and Table 12.1. Green infrastructure projects on both public and private land can serve to achieve this load reduction requirement. Additionally, Permittees shall prepare a reasonable assurance analysis (see below and the Fact Sheet) to demonstrate quantitatively that PCBs load reductions of at least 3 kg/yr will be achieved by 2040 through implementation of green infrastructure throughout the permit-area.

Table 12.2 PCBs Load Reduction Performance Criteria via Green Infrastructure Implementation by County

County Permittees	PCBs Load Reduction (g/yr) by June 30, 2020, through green infrastructure
Alameda Permittees	37
Contra Costa Permittees	23
San Mateo Permittees	15
Santa Clara Permittees	37
Solano Permittees: Suisun City, Vallejo, Fairfield	8
Totals	120

ii. Implementation Level

- (1) The Permittees shall implement green infrastructure projects so that PCBs loads are collectively reduced by 120 g/yr by June 30, 2020, which shall be extended to December 31, 2020, if the Permittees provide documentation that control measures that will attain the load reduction will be implemented by December 31, 2020. Permittees shall demonstrate achievement of these load reductions by using the accounting methods approved under provision C.12.b.iii(1). Load reductions from green infrastructure projects implemented prior to the effective date of this Permit may be counted toward the required green infrastructure reductions of this Permit term if these projects were established and implemented during the Previous Permit term, but load reductions from the activity were not realized or credited during the Previous Permit term.

The Permittees may meet the load reduction as a group. The load reduction requirements summed over all Permittees within each county are set forth in Table 12.2. If neither the permit-area-wide total load reduction nor the county-specific load reduction is achieved, Permittees shall achieve load reductions consistent with their share of the county total under provision C.12.a.ii(4).

- (2) Permittees shall prepare a reasonable assurance analysis that demonstrates how green infrastructure will be implemented in order to achieve a PCBs load reduction of 3 kg/yr across the permit-area by 2040. This analysis shall include the following:
 - a. Quantify the relationship between areal extent of green infrastructure implementation and PCBs load reductions, taking into consideration the scale of contamination of the treated area as well as the pollutant removal effectiveness of likely green infrastructure strategies;
 - b. Estimate the amount and characteristics of land area that will be treated through green infrastructure by 2020, 2030, and 2040;
 - c. Estimate the amount of PCBs load reductions that will result from green infrastructure implementation by 2020, 2030, and 2040;
 - d. Quantitatively demonstrate that PCBs reductions of at least 3 kg/yr will be realized by 2040 through implementation of green infrastructure projects; and
 - e. Ensure that the calculation methods, models, model inputs and modeling assumptions used to fulfill C.12.c.ii(2)a-d have been validated through a peer review process.

iii. Reporting

- (1) The Permittees shall submit in their 2018 Annual Report, as part of reporting for C.12.b.iii(3), the quantitative relationship between green infrastructure implementation and PCBs load reductions. This submittal shall include all data used and a full description of models and model inputs relied on to establish this relationship.
- (2) The Permittees shall submit in their 2020 Annual Report an estimate of the amount and characteristics of land area that will be treated through green infrastructure implementation by 2020, 2030, and 2040. This submittal shall include all data used and a full description of models and model inputs relied on to generate this estimate.
- (3) The Permittees shall submit in their 2020 Annual Report a reasonable assurance analysis to demonstrate quantitatively that PCBs reductions of at least 3 kg/yr will be realized by 2040 through implementation of green infrastructure projects. This submittal shall include all data used and a full description of models and model inputs relied on to make the demonstration and documentation of peer review of the reasonable assurance analysis.
- (4) The Permittees shall submit as part of reporting for C.12.b.iii(4), beginning with their 2019 Annual Report an estimate of the amount of PCBs load reductions resulting from green infrastructure implementation during the term of the Permit. This submittal shall include all data used and a full description of models and model inputs relied on to generate this estimate.

C.12.d. Prepare Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations

- i. Task Description** – Permittees shall prepare a plan and schedule for PCBs control measure implementation and reasonable assurance analysis demonstrating that sufficient control measures will be implemented to attain the PCBs TMDL wasteload allocations by 2030.
- ii. Implementation level** – Permittees shall prepare a PCBs control measures implementation plan and corresponding reasonable assurance analysis that demonstrates quantitatively that the plan will result in PCBs load reductions sufficient to attain the PCBs TMDL wasteload allocations by 2030. The plan must:
 - (1) Identify all technically and economically feasible PCBs control measures to be implemented (including green infrastructure projects); and
 - (2) Include a schedule according to which these technically and economically feasible control measures will be fully implemented; and
 - (3) Provide an evaluation and quantification of the PCBs load reduction of such measures as well as an evaluation of costs, control measure efficiency and significant environmental impacts resulting from their implementation.

iii. Reporting

Permittees shall submit the plan and schedule in the 2020 Annual Report.

C.12.e. Evaluate PCBs Presence in Caulks/Sealants Used in Storm Drain or Roadway Infrastructure in Public Rights-of-Way

- i. Task Description** –Permittees shall collect samples of caulk and other sealants used in storm drains and between concrete curbs and street pavement and investigate whether PCBs are present in such material and in what concentrations. PCBs are most likely present in material applied during the 1970s, so the focus of the investigations should be on structures installed during this era.

ii. Implementation Level

Permittees shall collect at least 20 composite samples (throughout the permit-area) of the caulks and sealants used in storm drains or roadway infrastructure in public rights-of-way and analyze this material for PCBs in such a way as to be able to detect a minimum PCBs concentration of 200 parts per billion. This sampling and analysis will count toward partial fulfillment of the monitoring effort aimed at finding PCBs sources (see management information need in C.8.f).

iii. Reporting

Permittees shall report on the results (including all data gathered) of this investigation no later than the 2018 Annual Report.

C.12.f. Manage PCB-Containing Materials and Wastes During Building Demolition Activities So That PCBs Do Not Enter Municipal Storm Drains

- i. Task Description** – Permittees shall develop and implement or cause to be developed and implemented an effective protocol for managing materials with PCBs concentrations of 50 ppm or greater in applicable structures at the time such structures undergo demolition so that PCBs do not enter MS4s. PCBs from these structures can enter storm drains during and/or after demolition through vehicle track-out, airborne releases, soil erosion, or stormwater runoff.

Applicable structures include, at a minimum, commercial, public, institutional and industrial structures constructed or remodeled between the years 1950 and 1980 with building materials with PCBs concentrations of 50 ppm or greater. Single-family residential and wood frame structures are exempt.

A Permittee is exempt from this requirement if it provides evidence acceptable to the Executive Officer that the only structures that existed pre-1980 within its jurisdiction were single-family residential and/or wood-frame structures.

ii. Implementation Level

- (1) The Permittees shall develop a protocol by June 30, 2019, that includes each of the following components, at a minimum:
 - a. The necessary authority to ensure that PCBs do not enter MS4s from PCB-containing materials in applicable structures at the time such structures undergo demolition;
 - b. A method for identifying applicable structures prior to their demolition; and
 - c. Method(s) for ensuring PCBs are not discharged to the storm drain from demolition of applicable structures.
- (2) By July 1, 2019, and thereafter, the Permittees shall implement or cause to be implemented the PCBs management protocol for ensuring PCBs are not discharged to MS4s from demolition of applicable structures via vehicle track-out, airborne releases, soil erosion, or stormwater runoff.
- (3) By July 1, 2019, Permittees shall develop an assessment methodology and data collection program to quantify in a technically sound manner PCBs loads reduced through implementation of the protocol for controlling PCBs during demolition of applicable structures.

iii. Reporting

- (1) In their 2016, 2017, and 2018 Annual Reports, the Permittees shall summarize the steps they have taken to begin implementing this requirement, which could include working with State and local agencies on inter-agency coordination regarding building demolitions, developing ordinances or policies, obtaining information materials, updating or supplementing permit application materials, developing a tracking tool for potential PCB-containing structures, and training relevant staff as needed to comply with this sub-provision.

- (2) Each Permittee seeking exemption from C.12.f requirements must submit in its 2017 Annual Report documentation, such as historic maps or other historic records, that clearly demonstrates that the only structures that existed pre-1980 within its jurisdiction were single-family residential and/or wood-frame structures.
- (3) In their 2020 Annual Report, the Permittees shall provide documentation demonstrating implementation with each of the minimum requirements in C.12.f.ii(1)(a)-(c).
- (4) In their 2020 Annual Report and thereafter, the Permittees shall provide documentation of each of the following items:
 - a. The number of applicable structures that applied for a demolition permit during the reporting year; and
 - b. A running list of the applicable structures that applied for a demolition permit (since the date the PCBs control protocol was implemented) that had material(s) with PCBs at 50 ppm or greater, with the address, demolition date, and brief description of PCBs control method(s) used.
- (5) In their 2020 Annual Report, Permittees shall submit an assessment methodology and data collection program to quantify PCBs loads reduced through implementation of the protocol for controlling PCBs during building demolition. This should be reported at the regional level on behalf of all Permittees.

C.12.g. Fate and Transport Study of PCBs: Urban Runoff Impact on San Francisco Bay Margins

- i. Task Description** – The Permittees shall conduct or cause to be conducted studies concerning the fate, transport, and biological uptake of PCBs discharged from urban runoff to San Francisco Bay margin areas.
- ii. Implementation Level** – The specific information needs include understanding the in-Bay transport of PCBs discharged in urban runoff, the sediment and food web PCBs concentrations in margin areas receiving urban runoff, the influence of urban runoff on the patterns of food web PCBs accumulation, especially in Bay margins, and the identification of drainages where urban runoff PCBs are particularly important in food web accumulation.
- iii. Reporting** – The Permittees shall submit in their 2017 Annual Report a workplan describing the specific manner in which these information needs will be accomplished and describing the studies to be performed with a preliminary schedule. The Permittees shall report on status of the studies in their 2018 Annual Report. The Permittees shall report in the March 15, 2020, Integrated Monitoring Report the findings and results of the studies completed, planned, or in progress as well as implications of studies on potential control measures to be investigated, piloted or implemented in future permit cycles.

C.12.h. Implement a Risk Reduction Program

- i. Task Description** – The Permittees shall conduct an ongoing risk reduction program to address public health impacts of PCBs in San Francisco Bay/Delta fish. The fish risk reduction program shall take actions to reduce actual and potential health risks in those people and communities most likely to consume San Francisco Bay-caught fish, such as subsistence fishers and their families. The risk reduction framework developed in the Previous Permit term, which funded community-based organizations to develop and deliver appropriate communications to appropriately targeted individuals and communities, is an appropriate approach. Permittees should work with local health departments, the Bay Area Clean Water Agencies, and the Western States Petroleum Association to leverage resources for this program and to appropriately target at-risk populations.
- ii. Implementation Level**

 - (1) At a minimum, Permittees shall conduct or cause to be conducted an ongoing risk reduction program with the potential to reach 3,000 individuals annually who are likely consumers of San Francisco Bay-caught fish. Permittees are encouraged to collaborate with San Francisco Bay industrial and wastewater discharger agencies in meeting this requirement.
 - (2) In year four of the Permit term, Permittees shall evaluate the effectiveness of their risk reduction program.
- iii. Reporting** – The Permittees shall report on the status of the risk reduction program in each of their Annual Reports, including a brief description of actions taken, an estimate of the number of people reached, and why these people are deemed likely to consume Bay fish. The Permittees shall report the findings of the effectiveness evaluation of their risk reduction program in their 2020 Annual Report.

C.13. Copper Controls

The Permittees shall implement the following control program for copper. The Permittees shall implement the control measures and accomplish the reporting on those control measures according to the provisions below. The purpose of these provisions is to implement the control measures identified in the Basin Plan amendment necessary to support the copper site-specific objectives in San Francisco Bay. The Permittees may comply with any requirement of C.13 Provisions through a collaborative effort.

C.13.a. Manage Waste Generated from Cleaning and Treating of Copper Architectural Features, Including Copper Roofs, during Construction and Post-Construction.

i. Task Description – The Permittees shall prohibit the discharge of wastewater to storm drains generated from the installation, cleaning, treating, and washing of the surface of copper architectural features, including copper roofs.

ii. Implementation Level

- (1) The Permittees shall require, when issuing building permits, use of appropriate BMPs for managing waste during and post-construction.
- (2) The Permittees shall educate installers and operators on appropriate BMPs for managing copper-containing wastes.
- (3) The Permittees shall enforce against noncompliance.

iii. Reporting

- (1) In the 2016 Annual Report, the Permittees shall certify that legal authority currently exists to prohibit the discharge of wastewater to storm drains generated from the installation, cleaning, treating, and washing of copper architectural features, including copper roofs.
- (2) In the 2016 Annual Report, the Permittees shall report how copper architectural features are addressed through the issuance of building permits.
- (3) The Permittees shall report annually permitting and enforcement activities.

C.13.b. Manage Discharges from Pools, Spas, and Fountains that Contain Copper-Based Chemicals

i. Task Description – Permittees shall prohibit discharges to storm drains from pools, spas, and fountains that contain copper-based chemicals.

ii. Implementation Level – The Permittees shall either: 1) require installation of a sanitary sewer discharge connection for pools, spas, and fountains, including connection for filter backwash, with a proper permit from the POTWs; or 2) require diversion of discharge for use in landscaping or irrigation.

iii. Reporting

- (1) In the 2016 Annual Report, the Permittees shall certify that legal authority currently exists to prohibit the discharges to storm drains of water containing copper-based chemicals from pools, spas, and fountains.
- (2) In the 2016 Annual Report, the Permittees shall report how copper-containing discharges from pools, spas, and fountains are addressed to accomplish the prohibition of the discharge.
- (3) The Permittees shall report annually on any enforcement activities.

C.13.c. Industrial Sources

i. Task Description – The Permittees shall ensure industrial facilities do not discharge elevated levels of copper to storm drains by ensuring, through industrial facility inspections, that proper BMPs are in place.

ii. Implementation Level

- (1) As part of industrial site controls required by Provision C.4, the Permittees shall identify facilities likely to use copper or have sources of copper (e.g., plating facilities, metal finishers, auto dismantlers) and include them in their inspection program plans.
- (2) The Permittees shall educate industrial inspectors on industrial facilities likely to use copper or have sources of copper and proper BMPs for them.
- (3) As part of the industrial inspection, inspectors shall ensure that proper BMPs are in place at such facilities to minimize discharge of copper to storm drains, including consideration of roof runoff that might accumulate copper deposits from ventilation systems on site.

iii. Reporting

The Permittees shall highlight copper reduction results in the industrial inspection component in the C.13 portion of each Annual Report.

C.14. City of Pacifica and San Mateo County Fecal Indicator Bacteria Controls

The City of Pacifica (City) and San Mateo County (County) Permittees shall implement Provision C.14 for fecal indicator bacteria. The City and County shall implement fecal indicator bacteria control measures in areas where benefits are most likely to accrue (focused implementation) and report on those control measures according to this provision. The goal of this provision is to implement the urban runoff (stormwater runoff and dry weather flows) requirements of the San Pedro Creek (Creek) and Pacifica State Beach (Beach) Indicator Bacteria TMDL (TMDL) and reduce exceedances of the bacterial water quality objectives for the water contact recreation beneficial use during the term of the Permit, thereby making substantial progress toward achieving the TMDL wasteload allocations. The wasteload allocations and the dates they must be attained by are listed in Table 14.1 below. The City and County may comply with any requirement of this provision through a collaborative effort.

Table 14.1. Numeric Targets, TMDLs, and Allocations Based on Allowable Exceedances of Single-Sample Bacteria Objectives for San Pedro Creek and Pacifica State Beach					
	San Pedro Creek		Pacifica State Beach		
	Dry Weather	Wet Weather	Summer Dry Weather (Apr. 1 to Oct. 31)	Winter Dry Weather (Nov. 1 to Mar. 31)	Wet Weather ⁴
Allowable Exceedances of Single-Sample Objectives (assuming daily sampling is conducted) ^{1,2.}	4	26	0	2	30
Allowable Exceedances of Single-Sample Objectives (assuming weekly sampling is conducted) ³	1	4	0	1	5
Attainment Date	August 1, 2028	August 1, 2028	August 1, 2021	August 1, 2021	August 1, 2021

1. Allowable exceedances are calculated by multiplying exceedance rates observed in the Reference System(s) by the Number of Days during each respective period in the reference year (1994).
2. To end up with whole numbers, where the fractional remainder for the calculated allowable exceedance days exceeds 0.1, the number of days is rounded up.
3. To determine the allowable number of exceedance events given a weekly sampling regime, as practiced for monitoring San Pedro Creek and Pacifica State Beach, the number of exceedance days was adjusted by solving for “X” in the following equation: $X = (\text{exceedance days} \times 52 \text{ weeks}) / 365 \text{ days}$.
4. Wet weather is defined as any day with 0.1 inches of rain or more and the following three days.

C.14.a. Implement Control Measures to Achieve Indicator Bacteria Wasteload Allocations.

- Task Description** – The City and County shall implement bacteria control measures and pollution prevention strategies to prevent or reduce discharges of bacteria from their storm drain systems to meet the stormwater TMDL

wasteload allocations in the San Pedro Creek watershed and Pacifica State Beach Indicator Bacteria TMDL (TMDL Project Area).

ii. Implementation Level – In order to comply with this provision element:

- (1) The County shall effectively prohibit potential illicit discharges into its storm sewer system from sanitary sewer overflows or the sanitary sewer lines within its jurisdiction.
- (2) The County shall address bacteria discharges from the existing and future commercial horse and dog kennel facilities (facilities) into its storm sewer system within its jurisdiction as follows:
 - (a) Conduct annual site inspections of each facility for code compliance by June 30 of each year, beginning in 2016.
 - (b) Conduct an annual compliance review of each facility's current manure, stormwater, and drainage management plans by June 30 of each year, beginning in 2016.
 - (c) Enforcement actions for noncompliant facilities will be in line with the County's Confined Animal Ordinance.
- (3) The City shall address bacteria discharges from the existing and future commercial horse facilities (facilities) within its jurisdiction as follows:
 - (a) Review each facility's compliance with the City's Administrative Policy on "Standards for Keeping Animals."
 - (b) Review each facility's compliance with the City's Municipal Code on "Animal Excreta."
 - (c) Conduct annual compliance review and inspection of each facility by June 30 of each year, beginning in 2016.
 - (d) Take progressive enforcement action(s), as needed, to bring noncompliant facilities into compliance with the City's Administrative Policy on "Standards for Keeping Animals" and Municipal Code on "Animal Excreta."
- (4) The City shall install new dog waste clean-up signs, waste bag dispensers, and trash cans at a minimum of 10 (ten) high priority locations within the TMDL Project Area (each site to receive all three elements: sign, bag dispenser, and trash can, unless some of the elements are already in place) by June 30, 2016. The high priority sites for these installations shall be determined via visual inspections of popular dog walking areas and their potential to discharge improperly deposited dog waste to the Creek or Beach.
- (5) The City shall develop and implement a visual inspection and cleanup plan for high dog waste accumulation areas along San Pedro Creek and its tributaries by June 30, 2016. From April 1 through October 31, inspections and cleanups shall, at a minimum, be conducted on a quarterly basis (e.g., once each in April, July, and October). From November 1 through March 31, inspections and cleanups shall be conducted prior to forecast rain

events with a forecast rainfall depth of 0.2 inches or more (as measured at Half Moon Bay Airport (KHAF) Meteorological Station), and at a frequency of no less than once a month.

- (6) The City shall develop and implement an enhanced pet waste public outreach and education campaign by June 30, 2016, that, at a minimum, includes all the following:
 - (a) Explore the possibility of establishing a new public pet waste management stakeholder group (e.g., formal or informal dog owners club).
 - (b) Prepare and implement public service announcements regarding pet waste management and associated impacts to the Creek and Beach to play on the local television station and to include in print ads in the Pacifica Tribune.
 - (c) Distribute a mailer with an informational brochure to residents and businesses describing proper pet waste management, the linkage of the watershed to the Creek and Beach, and the adverse impact on those water bodies and those recreating in them from improper pet waste management.
 - (d) Add a new web page to the City website with information on the TMDL and the water quality monitoring and BMP implementation activities, as well as information about proper pet waste management and the impact of improperly deposited waste on water quality of the Creek and Beach and public health.
 - (e) Create and implement a pre-rain pet waste cleanup email alert to residents, reminding them to cleanup accumulated pet waste in their yards that could otherwise get washed into the Creek and Beach.
 - (f) Participate in local events and festivals to distribute pet waste management materials (educational fliers, dog waste bags, etc.).
- (7) The City and County, based on the results of the source characterization and BMP effectiveness, and wasteload allocation attainment analyses described in sections C.14.b-c, shall modify or refocus control measure implementation efforts as appropriate, at a frequency of no less than every two years.

iii. Reporting

- (1) No later than March 15 of each year, the City and County shall submit a comprehensive TMDL Status and Monitoring Report, reporting on the specific control measures (as listed in section C.14.a.ii above) that have been implemented in the TMDL Project Area during the forgoing October 1 through September 30 period. This report shall include:
 - (a) The number, type, and locations and/or frequency (if applicable) of control measures;
 - (b) The description, scope, and start date of pollution prevention measures; and

- (c) Clear statements of the responsibilities of each participating Permittee for implementation of pollution prevention or control measures.
- (2) Beginning with the 2017 TMDL Status and Monitoring Report and continuing in all TMDL Status and Monitoring Reports, the City and County shall update all the information as necessary to account for new control measures implemented, but not described in the 2016 TMDL Status and Monitoring Report or revisions to control measures.

C.14.b. Conduct Water Quality Monitoring to Assess Attainment of Wasteload Allocations

- i. Task Description** - The purpose of the attainment monitoring is to determine whether or not the TMDL wasteload allocations are attained.
- ii. Implementation Level** - In order to comply with this provision element, the City and County shall conduct attainment water quality monitoring activities as follows:
 - (1) **Sample Locations** – Two stations shall be monitored to assess attainment of wasteload allocations for stormwater runoff and dry weather flows: the mouth of San Pedro Creek (Creek Mouth) and Pacifica State Beach (Linda Mar #5).
 - (2) **Sampling Frequency** – The two attainment stations shall be monitored weekly on an ongoing basis for fecal indicator bacteria. The weekly sampling shall occur year-round regardless of weather conditions, provided the conditions are safe for field staff to collect the samples.
 - (3) **Constituents** –Fecal indicator bacteria species measured in freshwater samples collected from the Creek Mouth shall include E. coli and total coliform. Fecal indicator bacteria species measured in ocean water samples collected from Linda Mar #5 station shall include enterococci, fecal coliform, and total coliform.

iii. Reporting

- (1) In their Annual TMDL Status and Monitoring Reports submitted on March 15 each year, the City and County shall analyze, summarize, and report the results of the ongoing attainment monitoring, as follows:
 - (a) The City and County shall complete a data evaluation, which shall focus on determining whether the TMDL wasteload allocations are being attained in San Pedro Creek and at Pacifica State Beach.
 - (b) The indicator bacteria results from the attainment monitoring stations (Creek Mouth and Linda Mar #5 stations) shall be compared to applicable bacterial water quality objectives and the allowable exceedances of those objectives as specified in the TMDL (Table 14.1).
 - (c) The data evaluation shall include tabulation and review of local rainfall data to determine whether the weekly attainment monitoring sampling events occurred during dry weather or wet weather.

- (d) An ongoing quantitative analysis of trends in bacteria densities and exceedances of applicable water quality objectives at the two attainment stations shall be conducted and reported annually.
- (e) A detailed and comprehensive assessment of wasteload allocation attainment by the end of year 4 of the Permit term shall be completed. If wasteload allocations are not achieved by the end of the Permit term, no later than 180 days prior to Permit expiration, the City and County shall submit a plan in their Report Of Waste Discharge, acceptable to the Executive Officer, that describes additional control measures or increased levels of existing control measures that will be implemented to prevent or reduce discharges of bacteria to storm drain systems to attain wasteload allocations. The plan shall include implementation methods, an implementation schedule, and proposed milestones.

C.14.c. Conduct Water Quality Monitoring to Characterize Sources of Bacteria in The Project Area and to Assess BMP Effectiveness

- i. **Task Description** – The purpose of characterization monitoring is to better characterize indicator bacteria contributions from specific sources and to evaluate control measure effectiveness. The characterization monitoring shall provide data to:
 - (1) Characterize indicator bacteria densities in subwatersheds, storm drain outfalls, and pump stations that have not been sampled in the past. Results of the investigation may be used to drive future control measure actions.
 - (2) Establish baseline (or current) conditions against which future monitoring results can be compared following new or ongoing control measure implementation.

Characterization monitoring shall be conducted every other year on a water year basis (i.e., October 1 through September 30) beginning with Water Year 2016 (WY2016) (i.e., October 1, 2015 – September 30, 2016). WY2016 characterization monitoring shall assess *E. coli* densities throughout the San Pedro Creek watershed, with a focus on the culverted branches of the North Fork. The City and County may elect to focus on other areas with potential or suspected bacteria sources during subsequent years. In WY2016, human-, horse-, and dog-specific genetic markers shall be analyzed for a subset of the samples to investigate whether these species contribute fecal contamination to the Creek. The characterization monitoring shall be iterative in nature and allow for flexibility of design and details in future years. Subsequent years of characterization monitoring, at a minimum, shall have the same level of effort as WY2016; however, in future years, based on the results of the WY2016 monitoring, alternative sampling stations may be targeted, sampling intensities may be modified, sampling frequencies may be adjusted, and/or the species-specific genetic marker sampling may be revised.

ii. Implementation Level – The City and County shall conduct characterization monitoring activities as follows:

- (1) **Sample Locations** – in WY2016, a minimum of twelve sampling stations shall be monitored. The selected sampling stations for the WY2016 characterization monitoring are divided into three separate categories, as follows:
 - (a) **Subwatersheds** – Four subwatersheds shall be targeted in WY2016: the North Fork (three stations), Middle Fork (one station), Sanchez Fork (one station), and Main Stem (three stations);
 - (b) **Pump stations** – The Linda Mar and Anza pump stations shall be sampled during wet weather discharge events to the Beach (during dry weather, flows entering these stations are pumped to a wastewater treatment facility and do not discharge to the Creek or Beach);
 - (c) **Stormwater outfalls** – The Crespi Canal, which is an engineered and concrete-lined drainage ditch, shall be sampled if it has flowing water.

In addition to the above stations, the Creek mouth shall be also sampled during events when species-specific genetic marker samples are collected (see section C.14.c.ii.3).

In monitoring years subsequent to the WY2016 monitoring year, based on the results of the WY2016 monitoring, the sample locations and quantity may be modified. However, in each subsequent monitoring year, a minimum of one hundred ten (110) fecal indicator bacteria samples shall be collected.

- (2) **Sampling Frequency** – in WY2016, the characterization stations shall be sampled a minimum of ten times over the course of the water year, as follows:
 - (a) **Characterization monitoring** shall begin in WY2016 with the first sample collected in Winter 2016;
 - (b) **Wet season** – Five sampling events shall be conducted during each of the wet season months (November through March). To the extent possible, wet season sampling events shall occur during wet weather, which as defined in the TMDL is any day with 0.1 inch of rain or more and the following three days;
 - (c) **Dry season** – Five sampling events shall be conducted during the dry season on a monthly basis from May through September.

In subsequent monitoring years, based on the results of the WY2016 monitoring, the sampling frequency may be modified. However, in each subsequent monitoring year, a minimum of one hundred ten (110) fecal indicator bacteria samples shall be collected.

- (3) **Constituents** – All samples shall be analyzed for *E. coli*. In addition, during each monitoring year (i.e., WY2016, and every other water year thereafter), at a minimum, samples collected at four stations during four sampling events (two wet season, two dry season) shall be analyzed for

human-, horse-, and dog-specific genetic markers to assess whether the targeted host species contribute fecal contamination to the Creek and Beach.

- (4) Monitoring Protocols and Data Quality – Where applicable, monitoring data must be SWAMP comparable. Minimum data quality shall be consistent with the latest version of the SWAMP Quality Assurance Project Plan (QAPP) for applicable parameters, including data quality objectives, field and laboratory blanks, field duplicates, laboratory spikes, and clean techniques, using the most recent SWAMP Standard Operating Procedures.
- (5) Future Revisions – Any and all changes to the characterization monitoring plan in subsequent years (e.g., WY2018, WY2020, etc.) shall be submitted to the Executive Officer for review and acceptance no later than 90 days prior to implementation.

iii. Reporting

- (1) In their Annual TMDL Status and Monitoring Reports beginning with the 2016 report submitted on March 15, 2017, and every other year's report thereafter, the City and County shall submit a comprehensive Characterization Monitoring Report reporting on all data collected during the preceding October 1 through September monitoring period.
- (2) Data evaluation shall focus on addressing the following questions:
 - (a) Which land uses and/or sources contribute most to bacteria impairments in San Pedro Creek watershed?
 - (b) Are controllable sources of fecal contamination (e.g., human, horses, and dogs) present in the San Pedro Creek watershed?
 - (c) What are the multi-year indicator bacteria density trends in the Creek and at the Beach (i.e., do control measures appear to be reducing bacteria)?
- (3) As appropriate, the Report shall include the following:
 - (a) Immediately following the Table of Contents, a Data Tables section that includes all the data collected pursuant to Provision C.14.d. and contains the following information pertaining to the foregoing monitoring period:
 - (i) A map showing all monitoring locations;
 - (ii) Immediately following the map, a single completed Locations and Parameters Table containing the following columns or rows for each location sampled: numeric site identifier, a short-hand site name such as "Creek Mouth," latitude, longitude, and parameters assessed;
 - (iii) Immediately following the Locations and Parameters Table, a single completed Results Table containing the following columns or rows for each location sampled: the short-hand site name and

datum/result for each constituent analyzed. Constituents that exceed applicable water quality objectives shall be highlighted.

- (b) For all data, a statement of the data quality.
- (c) An analysis of the data, which includes the following:
 - (i) Basic descriptive statistics using indicator bacteria data;
 - (ii) Identification and evaluation of any controllable sources of fecal contamination (e.g., human, horses, and dogs) present in the San Pedro Creek watershed;
 - (iii) Identification and analysis of any trends in stormwater or receiving water quality; and
 - (iv) Consideration of variability in the data sets.
- (d) A discussion of the data, which shall:
 - (i) Discuss monitoring data relative to prior conditions, beneficial uses and applicable water quality standards as described in the Basin or the Ocean plans;
 - (ii) Where appropriate, develop hypotheses to investigate regarding pollutant sources, trends, and BMP effectiveness;
 - (iii) Identify and prioritize water quality problems;
 - (iv) Identify potential sources of water quality problems;
 - (v) Describe followup actions;
 - (vi) Evaluate the effectiveness of existing control measures; and
 - (vii) Identify management actions needed to address water quality problems.

C.15. Exempted and Conditionally Exempted Discharges

The objective of this provision is to exempt unpolluted non-stormwater discharges from Discharge Prohibition A.1 and to conditionally exempt non-stormwater discharges that are potential sources of pollutants. In order for non-stormwater discharges to be conditionally exempted from Discharge Prohibition A.1, the Permittees must identify appropriate BMPs, monitor the non-stormwater discharges where necessary, and ensure implementation of effective control measures – as listed below – to eliminate adverse impacts to waters of the State consistent with the discharge prohibitions of the Order.

C.15.a. Exempted Non-Stormwater Discharges (Exempted Discharges):

- i. **Discharge Type** – In carrying out Discharge Prohibition A.1, the following unpolluted discharges are exempted from prohibition of non-stormwater discharges:
 - (1) Flows from riparian habitats or wetlands;
 - (2) Diverted stream flows;
 - (3) Flows from natural springs;
 - (4) Rising ground waters;
 - (5) Uncontaminated and unpolluted groundwater infiltration;
 - (6) Single family homes' pumped groundwater, foundation drains, and water from crawl space pumps and footing drains;
 - (7) Pumped groundwater from drinking water aquifers (excludes well development); and
 - (8) NPDES permitted discharges (individual or general permits).
- ii. **Implementation Level** – The non-stormwater discharges listed in Provision C.15.a.i above are exempted unless they are identified by the Permittees or the Executive Officer as sources of pollutants to receiving waters. If any of the above categories of discharges, or sources of such discharges, are identified as sources of pollutants to receiving waters, such categories or sources shall be addressed as conditionally exempted discharges in accordance with Provision C.15.b below.

C.15.b. Conditionally Exempted Non-Stormwater Discharges:

The following non-stormwater discharges are also exempt from Discharge Prohibition A.1 if they are either identified by the Permittees or the Executive Officer as not being sources of pollutants to receiving waters, or if appropriate control measures to eliminate adverse impacts of such sources are developed and implemented in accordance with the tasks and implementation levels of each category of Provision C.15.b.i-vi below.

- i. Discharge Type** – Pumped Groundwater, Foundation Drains, and Water from Crawl Space Pumps and Footing Drains
- (1) **Pumped Groundwater from Non-Drinking Water Aquifers**
Groundwater pumped from a monitoring well, used for groundwater basin management, which is owned and/or operated by a Permittee is allowed if the following requirements are met:
- (a) **Implementation Level** – Twice a year (once during the wet season and once during the dry season), representative samples shall be taken from each aquifer that potentially will discharge or has discharged into a storm drain. Samples collected and analyzed for compliance in accordance with self-monitoring requirements of other NPDES permits or sample data collected for drinking water regulatory compliance may be submitted to comply with this requirement as long as they meet the following criteria:
- (i) The water samples shall meet water quality standards consistent with the existing effluent limitations or pollutant triggers in the Water Board’s NPDES Groundwater General Permit, NPDES No. CAG912002.
- (ii) The water samples shall be analyzed using approved U.S. EPA methods: (a) U.S. EPA Method 8015 Modified for total petroleum hydrocarbons; (b) U.S. EPA Method 8260B and 8270C or equivalent for volatile and semi-volatile organic compounds; and (c) approved U.S. EPA methods to meet the triggers for the metals listed in the general permit discussed in C.15.(b)i.(1)(a)(i) above.
- (iii) The water samples shall be analyzed for pH and turbidity.
If a Permittee is unable to comply with the above criteria, the Permittee shall notify the Water Board upon becoming aware of the compliance issue.
- (b) **Required BMPs and Monitoring** – When greater than 2,500 gallons per day of uncontaminated (meeting the criteria in C.15.b.i.(1)(a)(i)) groundwater is discharged from these monitoring wells, the following shall be implemented:
- (i) Test the receiving water, upstream and downstream of the discharge point, to determine ambient turbidity and pH prior to discharging. Receiving water monitoring is not required if the discharge infiltrates into a dry creek immediately downstream.
- (ii) Test water samples for turbidity and pH on the first two consecutive days of dewatering.
- (iii) Maintain proper control of the discharge at the discharge point to prevent erosion, scouring of banks, nuisance, contamination, and excess sedimentation in the receiving waters.

- (iv) Maintain proper control of the flowrate and total flow during discharge so that it will not have a negative impact on the receiving waters.
 - (v) Appropriate BMPs shall be implemented to remove total suspended solids and silt to allowable discharge levels. Appropriate BMPs may include filtration, settling, coagulant application with no residual coagulant discharge, minor odor or color removal with activated carbon, small scale peroxide addition, or other minor treatment.
 - (vi) Turbidity of the discharged groundwater shall be maintained below 50 NTU for discharges to dry creeks, 110 percent of the ambient stream turbidity for a flowing stream with turbidities greater than 50 NTU, or 5 NTU above ambient turbidity for flowing streams with turbidities less than or equal to 50 NTU.
 - (vii) The pH of the discharged groundwater shall be maintained within the range of 6.5 to 8.5 and shall not vary from normal ambient pH by more than 0.5 pH units.
 - (c) If the Permittee is unable to comply with the criteria in Provision C.15.b.i.(1)(b)(i)-(vii), discharge shall cease immediately and the Permittee shall employ treatment to meet the above criteria, use other means of disposal, or apply for coverage under the Water Board's NPDES Groundwater General Permits.
 - (d) **Reporting** – The Permittees shall maintain records of these discharges, BMPs implemented, and any monitoring data collected.
- (2) **Pumped⁴¹ Groundwater, Foundation Drains, and Water from Crawl Space Pumps and Footing Drains**
- (a) Proposed new discharges of uncontaminated groundwater at flows of 10,000 gallons/day or more and all new discharges of potentially contaminated groundwater shall be reported to the Water Board so that they can be subject to NPDES permitting requirements. Proposed new discharges of uncontaminated groundwater at flows of less than 10,000 gallons/day shall be encouraged to discharge to a landscaped area or bioretention unit that is large enough to accommodate the volume.
 - (b) If the groundwater cannot be discharged to a landscaped area or bioretention unit and the discharge is greater than 2,500 gallons per day, it can only be considered for discharge once the following sampling is done to verify that the discharge is uncontaminated:
 - (i) The discharge shall meet WQS consistent with the existing effluent limitations or pollutant triggers in the Water Board's NPDES Groundwater General Permit, NPDES No. CAG912002.

⁴¹ Pumped groundwater not exempted in C.15.a or conditionally exempted in C.15.b.i.(1).

- (ii) The Permittees shall require that water samples from these discharge types be analyzed using the following approved U.S. EPA methods:
- U.S. EPA Method 8015 Modified for total petroleum hydrocarbons, and U.S. EPA Method 8260B and 8270C or equivalent for volatile and semi-volatile organic compounds.
 - The approved U.S. EPA Methods for the metals listed below that meet the corresponding Reporting Limits:

Metal	Reporting Limit
Antimony	6 µg/l
Arsenic	10 µg/l
Beryllium	4 µg/l
Cadmium	1.1 µg/l
Chromium VI	11 µg/l
Copper ⁴²	5.9 µg/l
Copper ⁴³	3.4 µg/l
Copper ⁴⁴	4.7 µg/l
Lead	3.2 µg/l
Mercury	0.025 µg/l
Nickel	19 µg/l
Selenium	5 µg/l
Silver	2.2 µg/l
Thallium	1.7 µg/l
Zinc	86 µg/l
Cyanide	2.9 µg/l

- (c) **Monitoring and Required BMPs** – When the discharge has been verified as uncontaminated per sampling completed in C.15.b.i.(2)(b) above, the Permittees shall require the following:
- (i) Test the receiving water, upstream and downstream of the discharge point, to determine ambient turbidity and pH prior to discharging. Receiving water monitoring is not required if the discharge infiltrates into a dry creek immediately downstream or if accessing the sampling points poses safety to personnel.
 - (ii) Test water samples for turbidity and pH on the first two consecutive days of dewatering.
 - (iii) Maintain proper control of the discharge at the discharge point to prevent erosion, scouring of bank, nuisance, contamination, and excess sedimentation in the receiving waters.

⁴² Applicable to Suisun Bay and San Pablo Bay segments of San Francisco Bay.

⁴³ Applicable to Central Bay and Lower Bay segments of San Francisco Bay.

⁴⁴ Applicable to South San Francisco Bay segments of San Francisco Bay.

- (iv) Maintain proper control of the flow rate and total flow during discharge so that it will not have a negative impact on the receiving waters.
- (v) Appropriate BMPs to render pumped groundwater free of pollutants and therefore exempted from prohibition may include the following: filtration, settling, coagulant application with no residual coagulant discharge, minor odor or color removal with activated carbon, small scale peroxide addition, or other minor treatment.
- (vi) Turbidity of discharged groundwater shall be maintained below 50 NTU for discharges to dry creeks, 110 percent of the ambient stream turbidity for a flowing stream with turbidities greater than 50 NTU, or 5 NTU above ambient turbidity for a flowing stream with turbidities less than or equal to 50 NTU.
- (vii) The pH of discharged water shall be maintained within the range of 6.5 to 8.5 and shall not vary from normal ambient pH by more than 0.5 pH units.
- (d) If a Permittee determines that a discharger or a project proponent is unable to comply with the criteria in C.15.b.i.(2)(c)(i)-(vii), the Permittee shall require the discharge to cease immediately and require that the discharger employ treatment to meet the above criteria, use other means of disposal, or apply for coverage under the Water Board's NPDES Groundwater General Permit.
- (e) **Reporting** – The Permittees shall maintain records of these discharges, BMPs implemented, and any monitoring data collected.

ii. Discharge Type – Air Conditioning Condensate

Required BMPs – Condensate from air conditioning units shall be reused or directed to landscaped areas or the ground. Discharge to a storm drain system may be allowed if discharge to landscaped areas or the ground is not feasible.

iii. Discharge Type – Emergency Discharges of Potable Water

- (1) **Emergency Discharges** – Discharges resulting from firefighting activities.
- (2) Required BMPs
 - (a) The Permittees shall implement or require firefighting personnel to implement BMPs for emergency discharges. However, the BMPs should not interfere with immediate emergency response operations or impact public health and safety. BMPs may include, but are not limited to, the plugging of the storm drain collection system for temporary storage, the proper disposal of water according to jurisdictional requirements, and the use of foam where there may be toxic substances on the property the fire is located.
 - (b) During emergency situations, priority of efforts shall be directed toward life, property, and the environment (in descending order). The

Permittees or firefighting personnel shall control the pollution threat from their activities to the extent that time and resources allow.

- (3) **Reporting Requirements** – Reporting requirements will be determined by Water Board staff on a case-by-case basis, such as for fire incidents at chemical plants.

iv. Discharge Type – Individual Residential Car Washing

Required BMPs

- (1) The Permittees shall discourage through outreach efforts individual residential car washing within their jurisdictional areas that discharge directly into their storm drain systems.
- (2) The Permittees shall encourage individuals to direct car wash waters to landscaped areas, use as little detergent as necessary, or wash cars at commercial car wash facilities.

v. Discharge Type – Swimming Pool, Hot Tub, Spa, and Fountain Water Discharges

(1) Required BMPs

- (a) The Permittees shall prohibit discharge of water that contains chlorine residual, copper algacide, filter backwash or other pollutants to storm drains or to waterbodies. Such polluted discharges from pools, hot tubs, spas, and fountains shall be directed to the sanitary sewer (with the local sanitary sewer agency's approval) or to landscaped areas that can accommodate the volume.
- (b) Discharges from swimming pools, hot tubs, spas and fountains shall be allowed into storm drain collection systems only if there are no other feasible disposal alternatives (e.g., disposal to sanitary sewer or landscaped areas) and if the discharge is properly dechlorinated to non-detectable levels of chlorine consistent with water quality standards.
- (c) The Permittees shall require that new or rebuilt swimming pools, hot tubs, spas and fountains within their jurisdictions have a connection⁴⁵ to the sanitary sewer to facilitate draining events. The Permittees shall coordinate with local sanitary sewer agencies to determine the standards and requirements necessary for the installation of a sanitary sewer discharge location to allow draining events for pools, hot tubs, spas, and fountains to occur with the proper permits from the local sanitary sewer agency.
- (d) The Permittees shall improve their public outreach and educational efforts and ensure implementation of the required BMPs and compliance in commercial, municipal, and residential facilities.

⁴⁵ This connection could be a drain in the pool to the sanitary sewer or a sanitary sewer clean out located close enough to the pool so that a hose can readily direct the pool discharge into the sanitary sewer clean out.

- (e) The Permittees shall implement the Illicit Discharge Enforcement Response Plan from C.5.b for polluted (contains chlorine, copper algaecide, filter backwash, or other pollutants) swimming pool, hot tub, spa, or fountain waters that get discharged into the storm drain.
 - (2) **Reporting** – The Permittees shall keep records of the authorized major discharges of dechlorinated pool, hot tubs, spa, and fountain water to the storm drain, including BMPs employed; such records shall be available for inspection by the Water Board.
- vi. **Discharge Type – Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering**
 - (1) **Required BMPs** – The Permittees shall promote measures that minimize runoff and pollutant loading from excess irrigation via the following:
 - (a) Promoting and/or working with potable water purveyors to promote conservation programs that minimize discharges from lawn watering and landscape irrigation practices;
 - (b) Promoting outreach messages regarding the use of less toxic options for pest control and landscape management;
 - (c) Promoting and/or working with potable water purveyors to promote the use of drought tolerant, native vegetation to minimize landscape irrigation demands;
 - (d) Promoting and/or working with potable water purveyors to promote outreach messages that encourage appropriate applications of water needed for irrigation and other watering practices; and
 - (e) Implementing the Illicit Discharge Enforcement Response Plan from C.5.b, as necessary, for ongoing, large-volume landscape irrigation runoff to their storm drain systems.
 - (2) **Reporting** – The Permittees shall provide implementation summaries in their Annual Report.

C.16. Discharges to Areas of Special Biological Significance

This Provision applies to stormwater discharges from the County of San Mateo into James V. Fitzgerald Marine Reserve Area of Special Biological Significance (ASBS). As set forth in the Fact Sheet, the State Water Board granted an exception to the ASBS discharge prohibition (ASBS Exception) in the Ocean Plan to applicants including the County of San Mateo for their existing stormwater discharges into ASBSs, provided they receive authorization to discharge by an NPDES permit; the discharges comply with all applicable terms, prohibitions, and special conditions of Attachment B - Special Protections (Special Protections) attached to and part of the ASBS Exception; and the discharges are essential for flood control or slope stability, designed to prevent soil erosion, occur only during wet weather, and are composed of only stormwater runoff. This Provision serves as the authorization for the County of San Mateo to discharge stormwater into the ASBS in accordance with the requirements below.

C.16.a. Discharges to the James V. Fitzgerald Marine Reserve ASBS

- i.** If the County of San Mateo meets all of the conditions set forth in Provision C.16.a.i. and C.16.a.ii., its stormwater discharges into the James V. Fitzgerald Marine Reserve ASBS from MS4 outfalls that were constructed or were under construction prior to January 1, 2005, are permitted for those discharges that:
 - (1) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
 - (2) Are designed to prevent soil erosion;
 - (3) Occur only during wet weather; and
 - (4) Are composed only of stormwater runoff.
- ii.** The County of San Mateo shall comply with all of the applicable terms, prohibitions, and special conditions of the Special Protections of the ASBS Exception set forth in State Water Board Resolution No. 2012-0012, as amended by State Water Board Resolution No. 2012-0031, including monitoring requirements, as they apply to stormwater. The Special Protections are hereby incorporated by reference into this Order and attached hereto as Attachment F. Notwithstanding anything to the contrary in this Order, the County of San Mateo shall not alter the natural ocean quality of the ASBS; shall not discharge trash into the ASBS; and shall not discharge non-stormwater into the ASBS except as provided in the Special Protections. As required by the Special Protections, the County of San Mateo shall address the preceding requirements (other than trash) in an ASBS Compliance Plan to be approved by the State Water Board Executive Director or the Regional Water Board Executive Officer and comply with the compliance schedule set forth in the Special Protections.
- iii.** Reporting – In addition to the monitoring requirements of the Special Restrictions, the County of San Mateo shall submit, upon approval by the State Water Board Executive Director, a copy of its approved ASBS Compliance Plan.

C.17. Annual Reports

- C.17.a.** The Permittees shall submit Annual Reports electronically in all cases by September 30 of each year. Each Annual Report shall report on the previous fiscal year beginning July 1 and ending June 30. The annual reporting requirements are set forth in Provisions C.1 – C.16. A paper copy of each Annual Report shall be submitted by October 15 of each year. The Permittees shall retain documentation as necessary to support their Annual Report. The Permittees shall make this supporting information available upon request within a timely manner, generally no more than ten business days unless otherwise agreed to by the Executive Officer.
- C.17.b.** The Permittees shall collaboratively develop a common annual reporting format for acceptance by the Executive Officer by April 1, 2016. The resulting Annual Report Form, once approved, shall be used by all Permittees. The Annual Report Form may be changed by April 1 of each year for the following Annual Report, to more accurately reflect the reporting requirements of Provisions C.1 – C.16, with the agreement of the Permittees and by the approval of the Executive Officer.
- C.17.c.** The Permittees shall certify in each Annual Report that they are in compliance with all requirements of the Order. If a Permittee is unable to certify compliance with a requirement, it must submit, in the cover letter of the Annual Report, the reason for failure to comply, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance.

C.18. Modifications to this Order

This Order may be modified, or alternatively, revoked or reissued, before the expiration date as follows:

- C.18.a.** To address significant changed conditions identified in the technical or Annual Reports required by the Water Board, or through other means or communication, that were unknown at the time of the issuance of this Order;
- C.18.b.** To incorporate applicable requirements of statewide water quality control plans adopted by the State Water Board or amendments to the Basin Plan approved by the State Water Board;
- C.18.c.** To comply with any applicable requirements, guidelines, or regulations issued or approved under section 402(p) of the CWA, if the requirement, guideline, or regulation so issued or approved contains different conditions or additional requirements not provided for in this Order. The Order as modified or reissued under this paragraph shall also contain any other requirements of the CWA then applicable; or
- C.18.d.** To approve and incorporate an alternative method or methods of distributing the county load reductions for mercury or PCBs on a Permittee-specific basis, as allowed by Provisions C.11 and C.12.

C.19. Standard Provisions

Each Permittee shall comply with all parts of the Standard Provisions contained in Attachment G of this Order.

C.20. Expiration Date

This Order expires on December 31, 2020, five years from the effective date of this Order. The Permittees must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date as application for reissuance of waste discharge requirements.

C.21. Rescission of Old Order

Order No. R2-2009-0074 is hereby rescinded on the effective date of this Order, which shall be January 1, 2016, provided that the Regional Administrator of U.S. EPA, Region IX, does not object.

C.22. Effective Date

The Effective Date of this Order and Permit shall be January 1, 2016, provided that the Regional Administrator of U.S. EPA, Region IX, does not object.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on November 19, 2015.

**Bruce H. Wolfe
Executive Officer**

- Attachment A: Municipal Regional Stormwater Permit Fact Sheet
- Attachment B: Provision C.3.b. Sample Reporting Table
- Attachment C: Provision C.3.g. Hydromodification Applicability Maps
- Attachment D: Provision C.8. Standard Monitoring Provisions
- Attachment E: Provision C.10. Supporting Information
- Attachment F: Provision C.16. ASBS Special Protection Zone
- Attachment G: Standard NPDES Stormwater Permit Provisions

ACRONYMS & ABBREVIATIONS

ACCWP	Alameda Countywide Clean Water Program
BAHM	Bay Area Hydrology Model
Basin Plan	Water Quality Control Plan for the San Francisco Bay Basin
BASMAA	Bay Area Stormwater Management Agencies Association
BMPs	Best Management Practices
CASQA	California Stormwater Quality Association
CCC	California Coastal Commission
CCCWP	Contra Costa Clean Water Program
CDFW	California Department of Fish and Wildlife
CEDEN	California Environmental Data Exchange Network
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CSBP	California Stream Bioassessment Procedures
CSCI	California Stream Condition Index
CWA	Federal Clean Water Act
CWC or Water Code	California Water Code
DCIA	Directly Connected Impervious Area
DPR	California Department of Pesticide Regulation
ERP	Enforcement Response Plan
FR	Federal Register
GIS	Geographic information System
HBANC	Homebuilders Association of Northern California
HM	Hydromodification Management
HMP	Hydromodification Management Plan
IC/ID	Illicit Connections and Illicit Discharges
IPM	Integrated Pest Management
LID	Low Impact Development
MEP	Maximum Extent Practicable

MRP	Municipal Stormwater Regional Permit
MS4	Municipal Separate Storm Sewer System
MTC	Metropolitan Transportation Commission
NAFSMA	National Association of Flood & Stormwater Management Agencies
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRDC	Natural Resources Defense Council
O&M	Operation and Maintenance
PAHs	Polynuclear Aromatic Hydrocarbons
PBDE	Polybrominated Diphenyl Ether
PCA	Pest Control Advisor
PCBs	Polychlorinated Biphenyls
PHAB	Physical Habitat (e.g., of streams)
POTW	Publicly Owned Treatment Works
QAPP	Quality Assurance Project Plan
RAA	Reasonable Assurance Analysis
RCRA	Federal Resource Conservation and Recovery Act
RMC	Regional Monitoring Coalition
RMP	Regional Monitoring Program
ROWD	Report of Waste Discharge
RTA	Rapid Trash Assessment
SARA	Federal Superfund Amendments and Reauthorization Act
SCURTA	Santa Clara Urban Rapid Trash Assessment
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SIC	Standard Industrial Classification
SMWPPP	San Mateo Countywide Water Pollution Prevention Program
SSID	Stressor Source Identification
SOP	Standard Operating Procedure
SWAMP	Surface Water Ambient Monitoring Program
SWPPP	Stormwater Pollution Prevention Plan

State Water Board	State Water Resources Control Board
TIE	Toxicity Identification Evaluation
TMDLs	Total Maximum Daily Loads
TSCA	Federal Toxic Substances Control Act
TST	Test of Significant Toxicity
TU	Toxicity Units
UCMR	Urban Creeks Monitoring Report
U.S. EPA	United States Environmental Protection Agency
Water Board	San Francisco Bay Regional Water Quality Control Board
WLAs	Wasteload Allocations
WQS	Water Quality Standards

GLOSSARY

Arterial Roads	Freeways, multilane highways, and other important roadways that supplement the Interstate System. Arterial roads connect, as directly as practicable, principal urbanized areas, cities, and industrial centers.
Beneficial Uses	The uses of water of the State protected against degradation, such as domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation and preservation of fish and wildlife, and other aquatic resources or preserves.
Collector Roads	Major and minor roads that connect local roads with arterial roads. Collector roads provide less mobility than arterial roads at lower speeds and for shorter distances.
Commercial Development	Development or redevelopment to be used for commercial purposes, such as office buildings, retail or wholesale facilities, restaurants, shopping centers, hotels, and warehouses.
Construction Site	Any project, including projects requiring coverage under the General Construction Permit, that involves soil disturbing activities including, but not limited to, clearing, grading, paving, disturbances to ground such as stockpiling, and excavation. Construction sites are all sites with disturbed or graded land area not protected by vegetation, or pavement, that are subject to a building or grading permit.
Conditionally Exempted Non-Stormwater Discharge	Non-stormwater discharges that are prohibited by A.1. of this Permit, unless such discharges are authorized by a separate NPDES permit or are not in violation of WQS because appropriate BMPs have been implemented to reduce pollutants to the maximum extent practicable, consistent with Provision C.15.
Discharger	Any responsible party or site owner or operator within the Permittees' jurisdiction whose site discharges stormwater runoff ₇ or a non-stormwater discharge ₂ .
Detached Single-family Home Project	The building of one single new house or the addition and/or replacement of impervious surface associated with one single existing house, which is not part of a larger plan of development.
Development	Construction, rehabilitation, redevelopment, or reconstruction of any public or private residential project (whether single-family, multi-unit, or planned unit development); or industrial, commercial, retail or other nonresidential project, including public agency projects.
Estate Residential Development	Development zoned for a minimum 1 acre lot size ₂ .
Emerging Pollutants	Pollutants in water that either: (1) May not have been thoroughly studied to date but are suspected by the scientific community to be a source of impairment of beneficial uses and/or present a health risk; or (2) Are not yet part of a monitoring program.

Erosion	The diminishing or wearing away of land due to wind, or water. Often the eroded debris (silt or sediment) becomes a pollutant via stormwater runoff. Erosion occurs naturally, but can be intensified by land disturbing and grading activities such as farming, development, road building, and timber harvesting.
Floor Area Ratio	The ratio of the total floor area on all floors of all buildings at a project site (except structures or floors dedicated to parking) to the total project site area.
Full Trash Capture Device	Full trash capture systems are defined as “any device or series of devices that traps all particles retained by a 5mm mesh screen and has a design treatment capacity of not less than the peak flow rate resulting from a one-year, one-hour, storm in the tributary drainage catchment area.” Trash collection booms and sea curtains do not meet this definition, but are effective for removal of floating trash if properly maintained. Because these devices do not meet the Full Trash Capture Device definition, only ¼ of the catchment area treated by these measures is credited toward meeting the trash management area requirement of C.10.a.
General Permits	Waste Discharge Requirements or NPDES Permits containing requirements that are applicable to a class or category of dischargers. The State has general stormwater permits for construction sites that disturb soil of 1 acre or more; industrial facilities; Phase II smaller municipalities (including nontraditional Small MS4s, which are governmental facilities, such as military bases, public campuses, and prison and hospital complexes); and small linear underground/overhead projects disturbing at least 1 acre, but less than 5 acres (including trenching and staging areas).
Grading	The cutting and/or filling of the land surface to a slope or elevation.
Green Infrastructure	Infrastructure that uses vegetation, soils, and natural processes to manage water and create healthier urban environments. At the scale of a city or county, green infrastructure refers to the patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. At the scale of a neighborhood or site, green infrastructure refers to stormwater management systems that mimic nature by soaking up and storing water.
Gross Density	The total number of residential units divided by the acreage of the entire site area, including land occupied by public right-of-ways, recreational, civic, commercial and other non-residential uses.
Hydrologic source control measures	Site design techniques that minimize and/or slow the rate of stormwater runoff from the site.
Hydromodification	The modification of a stream’s hydrograph, caused in general by increases in flows and durations that result when land is developed (e.g., made more impervious). The effects of hydromodification include, but are not limited to, increased bed and bank erosion, loss of habitat, increased sediment transport and deposition, and increased flooding.

Illicit Discharge	Any discharge to a municipal separate storm sewer (storm drain) system (MS4) that is prohibited under local, State, or federal statutes, ordinances, codes, or regulations. The term <i>illicit discharge</i> includes all non-stormwater discharges not composed entirely of stormwater and discharges that are identified under Section A. (Discharge Prohibitions) of this Permit. The term illicit discharge does not include discharges that are regulated by an NPDES permit (other than the NPDES permit for discharges from the MS4) or authorized by the Executive Officer.
Impervious Surface	A surface covering or pavement of a developed parcel of land that prevents the land's natural ability to absorb and infiltrate rainfall/stormwater. Impervious surfaces include, but are not limited to, roof tops; walkways; patios; driveways; parking lots; storage areas; impervious concrete and asphalt; and any other continuous watertight pavement or covering. Landscaped soil and pervious pavement, including pavers with pervious openings and seams, underlain with pervious soil or pervious storage material, such as a gravel layer sufficient to hold at least the C.3.d volume of rainfall runoff are not impervious surfaces. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces for purposes of determining whether a project is a Regulated Project under Provisions C.3.b. and C.3.g. Open, uncovered retention/detention facilities shall be considered impervious surfaces for purposes of runoff modeling and meeting the Hydromodification Standard.
Industrial Development	Development or redevelopment of property to be used for industrial purposes, such as factories; manufacturing buildings; and research and development parks.
Infill Site	A site in an urbanized area where the immediately adjacent parcels are developed with one or more qualified urban uses or at least 75% of the perimeter of the site adjoins parcels that are developed with qualified urban uses and the remaining 25% of the site adjoins parcels that have previously been developed for qualified urban uses and no parcel within the site has been created within the past 10 years.
Infiltration Device	Any structure that is deeper than wide and designed to infiltrate stormwater into the subsurface, and, as designed, bypass the natural groundwater protection afforded by surface soil. These devices include dry wells, injection wells, and infiltration trenches (includes french drains).
Joint Stormwater Treatment Facility	A stormwater treatment facility built to treat the combined runoff from two or more Regulated Projects located adjacent to each other.
Local Roads	Roads that provide limited mobility and are the primary access to residential areas, businesses, farms, and other local areas. Local roads offer the lowest level of mobility and usually contain no bus routes. Service to through traffic movement usually is deliberately discouraged in local roads.

Maximum Extent Practicable (MEP)	A standard for implementation of stormwater management actions to reduce pollutants in stormwater. CWA 402(p)(3)(B)(iii) requires that municipal stormwater permits “shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the state determines appropriate for the control of such pollutants.” Also see State Water Board Order WQ 2000-11.
Mixed-use Development or Redevelopment	Development or redevelopment of property to be used for two or more different uses, all intended to be harmonious and complementary. An example is a high-rise building with retail shops on the first 2 floors, office space on floors 3 through 10, apartments on the next 10 floors, and a restaurant on the top floor.
Municipal Separate Storm Sewer System (MS4)	<p>A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains), as defined in 40 CFR 122.26(b)(8):</p> <ol style="list-style-type: none"> (1) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law...including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization or a designated and approved management agency under section 208 of the CWA) that discharges into waters of the United States; (2) Designed or used for collecting or conveying stormwater; (3) Which is not a combined sewer; and (4) Which is not part of a Publicly Owned Treatment Works (POTW), as defined in 40 CFR 122.2.
Municipal Corporation Yards, Vehicle Maintenance/Material Storage Facilities/	<p>Any Permittee-owned or -operated facility, or portion thereof, that:</p> <ol style="list-style-type: none"> (1) Conducts industrial activity, operates or stores equipment, and materials; (2) Performs fleet vehicle service/maintenance including repair, maintenance, washing, or fueling; and/or (3) Performs maintenance and/or repair of machinery/equipment;
National Pollutant Discharge Elimination System (NPDES)	A national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the CWA.
Notice of Intent (NOI)	The application form by which dischargers seek coverage under General Permits, unless the General Permit requires otherwise.
Parking Lot	Land area or facility for the parking or storage of motor vehicles used for business, commerce, industry, or personal use.
Permittee/Permittees	Municipal agency/agencies that are named in and subject to the requirements of this Permit.
Permit Effective Date	The date at least 45 days after Permit adoption, provided the Regional Administrator of U.S. EPA Region 9 has no objection, whichever is later.

Pervious Pavement	Pavement that stores and infiltrates rainfall at a rate equal to immediately surrounding unpaved, landscaped areas, or that stores and infiltrates the rainfall runoff volume described in C.3.d.
Point Source	Any discernible, confined, and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operations, landfill leachate collection systems, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.
Pollutants of Concern	Pollutants that impair waterbodies listed under CWA section 303(d), pollutants associated with the land use type of a development, including pollutants commonly associated with urban runoff. Pollutants commonly associated with stormwater runoff include, but are not limited to, total suspended solids; sediment; pathogens (e.g., bacteria, viruses, protozoa); heavy metals (e.g., copper, lead, zinc, and cadmium); petroleum products and PAHs; synthetic organics (e.g., pesticides, herbicides, and PCBs); nutrients (e.g., nitrogen and phosphorus fertilizers); oxygen-demanding substances (e.g., decaying vegetation and animal waste); and trash.
Potable Water	Water that is safe for domestic use, drinking, and cooking.
Pre-Project Runoff Conditions	Stormwater runoff conditions that exist onsite immediately before development activities occur. This definition is not intended to be interpreted as that period before any human-induced land activities occurred. This definition pertains to redevelopment as well as initial development.
Public Development	Any construction, rehabilitation, redevelopment or reconstruction of any public agency project, including but not limited to, libraries, office buildings, roads, and highways.
Redevelopment	Land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred.
Regional Monitoring Program (RMP)	A monitoring program aimed at determining San Francisco Bay Region receiving water conditions. The program was established in 1993 through an agreement among the Water Board, wastewater discharger agencies, dredgers, Municipal Stormwater Permittees and the San Francisco Estuary Institute to provide regular sampling of Bay sediments, water, and organisms for pollutants. The program is funded by the dischargers and managed by the San Francisco Estuary Institute.
Regional Project	A regional or municipal stormwater treatment facility that discharges into the same watershed that the Regulated Project does.
Regulated Projects	Development projects as defined in Provision C.3.b.ii.
Residential Housing Subdivision	Any property development of multiple single-family homes or of dwelling units intended for multiple families/households (e.g., apartments, condominiums, and town homes).

Retrofitting	Installing improved pollution control devices at existing facilities to attain water quality objectives.
Sediments	Soil, sand, and minerals washed from land into water, usually after rain.
Solid Waste	All putrescible and nonputrescible solid, semisolid, and liquid wastes as defined by California Government Code Section 68055.1 (h).
Source Control BMPs	Land use or site planning practices, or structural or nonstructural measures, that aim to prevent runoff pollution by reducing the potential for contact with rainfall runoff at the source of pollution. Source control BMPs minimize the contact between pollutants and urban runoff.
Standard Industrial Classification (SIC)	A federal system for classifying establishments by the type of activity in which they are engaged using a four-digit code.
Stormwater Pumping Station	Mechanical device (or pump) that is installed in MS4s or pipelines to discharge stormwater runoff and prevent flooding.
Stormwater Treatment System	Any engineered system designed to remove pollutants from stormwater runoff by settling, filtration, biological degradation, plant uptake, media absorption/adsorption or other physical, biological, or chemical process. This includes landscape-based systems such as grassy swales and bioretention units as well as proprietary systems.
Surface Water Ambient Monitoring Program (SWAMP)	The State Water Board's program to monitor surface water quality; coordinate consistent scientific methods; and design strategies for improving water quality monitoring, assessment, and reporting.
Total Maximum Daily Loads (TMDLs)	The maximum amount of a pollutant that can be discharged into a waterbody from all sources (point and nonpoint) and still maintain WQS. Under CWA section 303(d), TMDLs must be developed for all waterbodies that do not meet WQS even after application of technology-based controls, more stringent effluent limitations required by a state or local authority, and other pollution control requirements such as BMPs.
Toxicity Identification Evaluation (TIE)	TIE is a series of laboratory procedures used to identify the chemical(s) responsible for toxicity to aquatic life. These procedures are designed to decrease, increase, or transform the bioavailable fractions of contaminants to assess their contributions to sample toxicity. TIEs are conducted separately on water column and sediment samples.
Trash and Litter	Trash consists of litter and particles of litter. California Government Code Section 68055.1 (g) defines litter as all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials, thrown or deposited on the lands and waters of the State, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing.

Treatment	Any method, technique, or process designed to remove pollutants and/or solids from polluted stormwater runoff, wastewater, or effluent.
Waste Load Allocations (WLAs)	A portion of a receiving water's TMDL that is allocated to one of its existing or future point sources of pollution.
Water Quality Control Plan (Basin Plan)	The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State within the Region, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives and discharge prohibitions. The Basin Plan was duly adopted and approved by the State Water Board, U.S. EPA, and the Office of Administrative Law where required.
Water Quality Objectives	The limits or levels of water quality elements or biological characteristics established to reasonably protect the beneficial uses of water or to prevent pollution problems within a specific area. Water quality objectives may be numeric or narrative.
Water Quality Standards	State-adopted and U.S. EPA-approved water quality standards for waterbodies. The standards prescribe the use of the waterbody and establish the WQS that must be met to protect designated uses. Water quality standards also include the federal and State anti-degradation policy.
Wet Season	October 1 through April 30 of each year

ATTACHMENT A

MUNICIPAL REGIONAL STORMWATER PERMIT FACT SHEET

**FACT SHEET/RATIONALE
TECHNICAL REPORT**

for

ORDER NO. R2-2015-0049

NPDES Permit No. CAS612008

**Municipal Regional Stormwater NPDES Permit
and
Waste Discharge Requirements**

for

The cities of Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, and Union City, Alameda County, the Alameda County Flood Control and Water Conservation District, and Zone 7 of the Alameda County Flood Control and Water Conservation District, which have joined together to form the Alameda Countywide Clean Water Program

The cities of Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District, which have joined together to form the Contra Costa Clean Water Program

The cities of Campbell, Cupertino, Los Altos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San Jose, Santa Clara, Saratoga, and Sunnyvale, the towns of Los Altos Hills and Los Gatos, the Santa Clara Valley Water District, and Santa Clara County, which have joined together to form the Santa Clara Valley Urban Runoff Pollution Prevention Program

The cities of Belmont, Brisbane, Burlingame, Daly City, East Palo Alto, Foster City, Half Moon Bay, Menlo Park, Millbrae, Pacifica, Redwood City, San Bruno, San Carlos, San Mateo, and South San Francisco, the towns of Atherton, Colma, Hillsborough, Portola Valley, and Woodside, the San Mateo County Flood Control District, and San Mateo County, which have joined together to form the San Mateo Countywide Water Pollution Prevention Program

The cities of Fairfield and Suisun City, which have joined together to form the Fairfield-Suisun Urban Runoff Management Program

The City of Vallejo and the Vallejo Sanitation and Flood Control District

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I. CONTACT INFORMATION

Water Board Staff Contact: Dale Bowyer, 1515 Clay Street, Suite 1400, Oakland, CA 94612, 510-622-2323, 510-622-2501 (fax), email: dbowyer@waterboards.ca.gov

The Permit and other related documents can be downloaded from the Water Board website at:

http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stormwater/Municipal/mrp_sw_reissuance.shtml

Comments can be electronically submitted to mrp.reissuance@waterboards.ca.gov.

All documents referenced in this Fact Sheet and in the Order are available for public review at the Water Board office, located at the address listed above. Public records are available for inspection during regular business hours, from 9:00 am to 4:00 pm, Monday through Friday, 12 - 1 pm excluded. To schedule an appointment to inspect public records, contact Melinda Wong at 510-622-2430.

II. PERMIT GOALS AND PUBLIC PROCESS

Goals

The Goals for the Municipal Regional Stormwater Permit (hereinafter, the Permit) include:

1. Continue regulating six Phase I municipal stormwater NPDES permits in one consistent permit that is regional in scope.
2. Include more specificity in NPDES permit requirements than the pre-2009 permits which lacked concrete requirements and thus did not result in the desired improvement of water quality. Continue requiring (A) stormwater management actions, (B) a specific level of implementation for each action or set of actions, and (C) reporting and effectiveness evaluation requirements for each action sufficient to determine compliance.
3. Incorporate the Stormwater Management Plan level of detail and specificity into the Permit. Stormwater Management Plans have always been considered integral to the municipal stormwater NPDES permits, but have not received the level of public review in the adoption process necessary relative to their importance in adequate stormwater pollutant management implementation.
4. Implement and enhance actions to control 303(d) listed pollutants, pollutants of concern, and achieve Waste Load Allocations adopted under Total Maximum Daily Loads.
5. Implement more specific and comprehensive stormwater monitoring, including monitoring for 303(d) listed pollutants.

Public Process

Water Board staff conducted stakeholder meetings with the Permittees and other interested parties to develop this Permit. These meetings included Water Board staff, representatives of the Permittees, and representatives of environmental groups.

Implementation

It is the Water Board's intent that this Permit shall ensure attainment of applicable water quality objectives and protection of the beneficial uses of receiving waters and associated habitat. This Permit requires that discharges shall not cause exceedances of water quality objectives nor shall they cause certain conditions to occur that create a condition of nuisance or water quality impairment in receiving waters. Accordingly, the Water Board is requiring that these standard requirements be addressed through the implementation of technically and economically feasible control measures to reduce pollutants in stormwater discharges to the maximum extent practicable as provided in section 402(p) of the CWA. In addition, this Permit contains water quality-based effluent limitations to implement TMDLs. Compliance with the Discharge Prohibitions, Receiving Water Limitations, and Provisions of this Permit is deemed compliance with the requirements of this Permit. If these measures, in combination with controls on other point and nonpoint sources of pollutants, do not result in attainment of applicable water quality objectives, the Water Board may invoke Provision C.1. and C.18 to impose additional conditions that require implementation of additional control measures.

Each of the Permittees is individually responsible for adoption and enforcement of ordinances and policies, for implementation of assigned control measures or best management practices (BMPs) needed to prevent or reduce pollutants in stormwater, and for providing funds for the capital, operation, and maintenance expenditures necessary to implement such control measures/BMPs within its jurisdiction. Each Permittee is also responsible for its share of the costs of the area-wide component of the countywide program to which the Permittee belongs. Enforcement actions concerning non-compliance with the Permit will be pursued against individual Permittee(s) responsible for specific violations of the Permit.

III. BACKGROUND

Early Permitting Approach

The federal Clean Water Act (CWA) was amended in 1987 to address urban stormwater runoff pollution of the nation's waters. One requirement of the amendment was that many municipalities throughout the United States were obligated for the first time to obtain National Pollutant Discharge Elimination System (NPDES) permits for discharges of urban runoff from their Municipal Separate Storm Sewer Systems (MS4s). In response to the CWA amendment (and the pending federal NPDES regulations that would implement the amendment), the Water Board issued municipal stormwater Phase I permits in the early 1990s. These permits were issued to the entire county-wide urban areas of Santa Clara, Alameda, San Mateo and Contra Costa counties, rather than to individual cities over 100,000 population threshold. The cities chose to collaborate in countywide groups, pool

resources and expertise, and share information, public outreach and monitoring costs, among other tasks.

During the early permitting cycles, the county-wide programs developed many of the implementation specifics that were set forth in their Stormwater Pollution Prevention Management Plans (Plans). The permit orders were relatively simple documents that referred to the Plans for implementation details. Often specific aspects of permit and Plan implementation evolved during the five year permit cycle, with relatively significant changes approved at the Water Board staff level without significant public review and comment.

Merging Permit Requirements and Specific Requirements Previously Contained in Stormwater Management Plans

U.S. Environmental Protection Agency (U.S. EPA) stormwater rules for Phase I stormwater permits envisioned a process in which municipal stormwater management programs contained the detailed BMP and specific level of implementation information, and are reviewed and approved by the permitting agency before the municipal NPDES stormwater permits are adopted. The previous permits established a definition of a stormwater management program and required each Permittee to submit an urban runoff management plan and annual work plans for implementing its stormwater management program. An advantage to this approach was that it provided maximum flexibility for Permittees to tailor their stormwater management programs to reflect local priorities and needs. However, Water Board staff found it difficult to determine Permittees' compliance with the permits, due to the lack of specific requirements and measurable outcomes of some required actions in the plans.

Moreover, these stormwater management plans and amendments thereto made by the Permittees were not subject to public input, contrary to the U.S. Ninth Circuit Court's decision in the Phase II stormwater context that public participation is required for a stormwater management plan, because the substantive information about how an operator will reduce pollutants to the maximum extent possible was found in the stormwater management plan rather than the permit itself. (*Environmental Defense Center v. EPA* (9th Cir. 2003) 344 F.3d 832, 857.)

This Permit continues to modify these previous approaches by establishing the stormwater management program requirements and defining up front, as part of the Permit Development Process, the minimum acceptable elements of the municipal stormwater management program. The advantages of this approach are that it satisfies the public involvement requirements of both the federal Clean Water Act and the California Water Code. An advantage for Permittees and the public of this approach is that the permit requirements are known at the time of permit issuance and not left to be determined later through an iterative review and approval of stormwater management plan process, during which time was spent more on getting an acceptable plan than on-the-ground actions. While it may still be necessary to amend the Permit prior to expiration where allowed, any need to do this should be minimized.

This Permit does not include approval of all Permittees' stormwater management programs or annual reports as part of the administration of the Permit. To do so would require

significantly increased staff resources. Instead, minimum measures have been established to simplify assessment of compliance and allow the public to more easily assess each Permittee's compliance. Each Permit provision and its reporting requirements are written with this in mind. That is, each provision establishes the required actions, minimum implementation levels (i.e., minimum percentage of facilities inspected annually, escalating enforcement, reporting requirements for tracking projects, number of monitoring sites), and specific reporting elements to substantiate that these implementation levels have been met. Water Board staff will evaluate each individual Permittee's compliance through annual report review and the audit process.

The challenge in drafting the Permit is to provide the flexibility described above considering the different sizes and resources of the numerous Permittees, while ensuring that the Permit is still enforceable. To achieve this, the Permit frequently prescribes minimum measurable outcomes, while providing Permittees with flexibility in the approaches they use to meet those outcomes. Enforceability has been found to be a critical aspect of the Permit. A balance between flexibility and enforceability has been crafted into the Permit.

Current Permit Approach

As stated above, because stormwater management plans were legally an integral part of the permits and were subject to complete public notice, review and comment, this permit reissuance continues to incorporate those plan level details in the Permit, thus merging the Permittees' stormwater management plans into the Permit in one document. This Permit specifies the following: 1) requirements to effectively prohibit non-stormwater discharges into the storm drain system, pursuant to CWA § 402(p)(3)(B)(ii); 2) technology-based effluent limitations that require controls to reduce the discharge of pollutants to the "maximum extent practicable" (MEP)¹ pursuant to CWA § 402(p)(3)(B)(iii); and 3) water quality-based effluent limitations (WQBELs) pursuant to CWA § 402(p)(3)(B)(iii), which authorizes the inclusion of "such other provisions as the Administrator or the State determines appropriate for the control of [] pollutants," for pesticides, trash, mercury, PCBs, and bacteria, in addition to technology-based effluent limitations. WQBELs for these pollutants are appropriate for control because water quality standards are not being met and these pollutants have impaired Bay Area waters. The Permit includes requirements for the following components:

- Discharge Prohibitions and Receiving Water Limitations

¹ The Clean Water Act and its regulations have not specifically defined "MEP"; rather, it is a flexible and evolving standard. Congress established this flexible MEP standard so that administrative bodies would have "the tools to meet the fundamental goals of the Clean Water Act in the context of storm water pollution." (*Building Industry Ass'n of San Diego County v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866, 884.) This standard was designed to allow permit writers flexibility to tailor permits to the site-specific nature of MS4s and to use a combination of pollution controls that may be different in different permits. (*In re City of Irving, Texas, Municipal Storm Sewer System* (July 16, 2001) 10 E.A.D. 111 (E.P.A.)) The MEP standard is also expected to evolve in light of programmatic improvements, new source control initiatives, and technological advances that serve to improve the overall effectiveness of storm water management programs in reducing pollutant loading to receiving waters. This is consistent with USEPA's interpretation of storm water management programs. As explained by USEPA in its 1990 rulemaking, "EPA anticipates that storm water management programs will evolve and mature over time" (55 Fed.Reg. 47990, 48052 (Nov. 16, 1990)).

- Municipal Operations
- New Development and Redevelopment
- Industrial and Commercial Site Controls
- Illicit Discharge and Elimination
- Construction Site Controls
- Public Information and Outreach
- Water Quality Monitoring
- Pesticides Toxicity Controls
- Trash Reduction
- Mercury Controls
- PCBs Controls
- Copper Controls
- Pacifica and San Mateo County Beach and San Pedro Creek Bacteria Controls for Beach and San Pedro Creek
- Exempt and Conditionally Exempt Discharges
- San Mateo County Discharges to ASBS

IV. ECONOMIC ISSUES

California Water Code (CWC) section 13241 requires the Water Board to consider certain factors, including economic considerations, in the adoption of water quality objectives. CWC section 13263 requires the Water Board to take into consideration the provisions of CWC section 13241 in adopting waste discharge requirements.

In *City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, the California Supreme Court considered whether regional water boards must comply with CWC section 13241 when issuing waste discharge requirements under CWC section 13263(a) by taking into account the costs a permittee will incur in complying with the permit requirements. The Court concluded that whether it is necessary to consider such cost information “depends on whether those restrictions meet or exceed the requirements of the federal Clean Water Act.” (*Id.* at p. 627.) The Court ruled that regional water boards may not consider the factors in CWC section 13241, including economics, to justify imposing pollutant restrictions that are less stringent than applicable federal law requires. (*Id.* at pp. 618, 626-627 [“[Water Code section 13377 specifies that [] discharge permits issued by California’s regional boards must meet the federal standards set by federal law. In effect, section 13377 forbids a regional board’s consideration of any economic hardship on the part of the permit holder if doing so would result in the dilution of the requirements set by Congress in the Clean Water Act...Because CWC section 13263 cannot authorize what federal law forbids, it cannot authorize a regional board, when issuing a [] discharge permit, to use compliance costs to justify pollutant restrictions that do not comply with federal clean water standards.”]). However, when pollutant restrictions in an NPDES permit are more stringent than federal law requires, CWC section 13263 requires that the regional water boards consider the factors described in CWC section 13241 as they apply to those specific restrictions.

As discussed in Section V.C., State Mandates, the Water Board finds that the requirements in this Order are not more stringent than the minimum federal requirements. Among other requirements, federal law requires MS4 permits to include requirements to effectively prohibit non-storm water discharges into the MS4s, in addition to requiring controls to reduce the discharge of pollutants in stormwater to the MEP, and other provisions as USEPA or the State determines are appropriate for the control of pollutants in MS4 discharges.

The requirements in this Order may be more specific or detailed than those enumerated in federal regulations under 40 CFR 122.26 and guidance; however, the requirements have been designed to be consistent with and within the federal statutory mandates described in CWA section 402(p)(3)(B)(ii) and (iii) and the related federal regulations and guidance. Consistent with federal law, all of the conditions in this Order could have been included in a permit adopted by USEPA in the absence of the in lieu authority of California to issue NPDES permits.

Moreover, the inclusion of numeric WQBELs in this Order does not cause this Order to be more stringent than federal law. Federal law authorizes both narrative and numeric effluent limitations to meet state water quality standards. The inclusion of WQBELs as discharge specifications in an NPDES permit in order to achieve compliance with water quality standards is not a more stringent requirement than the inclusion of BMP-based permit limitations to achieve water quality standards (State Water Board Order No. WQ 2006-0012 (Boeing)). Therefore, consideration of the factors set forth in CWC section 13241 is not required for permit requirements to implement the effective prohibition on the discharge of non-stormwater discharges into the MS4 or for controls to reduce the discharge of pollutants in stormwater to the MEP, or other provisions that the Water Board has determined appropriate to control such pollutants, as those requirements are mandated by federal law.

While the Water Board need not consider costs under CWC section 13241, the Water Board nevertheless has considered cost information, especially since it is a consideration in the implementation of technology controls to the MEP.

In 2000, the State Water Board issued a precedential order (Order WQ 2000-11 (Cities of Bellflower, et al.)) stating that cost of compliance with the programs and requirements of a municipal stormwater permit is a relevant factor in determining MEP. The Order also explicitly stated that a cost benefit analysis is not required. The State Water Board discussed costs as follows:

While the standard of MEP is not defined in the storm water regulations or the Clean Water Act, the term has been defined in other federal rules. . . .

These definitions focus mostly on technical feasibility, but cost is also a relevant factor. There must be a serious attempt to comply, and practical solutions may not be lightly rejected. If, from the list of BMPs, a permittee chooses only a few of the least expensive methods, it is likely that MEP has not been met. On the other hand, if a permittee employs all applicable BMPs except those where it can show that they are not technically feasible in the locality, or whose cost would exceed any benefit to be derived, it would have met the standard. MEP requires permittees to choose effective

BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the cost would be prohibitive. Thus while cost is a factor, the Regional Water Board is not required to perform a cost-benefit analysis.

(State Water Board Order WQ 2000-11, *supra*, p.20.) The cost of complying with TMDL waste load allocations is not required to be considered since TMDLs are not subject to the MEP standard. Federal law requires that NPDES permits contain effluent limitations consistent with the assumptions of any applicable wasteload allocation in a TMDL. (40 C.F.R. §122.44(d)(1)(vii)(B).) With that background, we turn to economic considerations.

Economic discussions of urban runoff management programs tend to focus on costs incurred by municipalities in developing and implementing the programs. This is appropriate, and these costs are significant and a major issue for the Permittees. However, when considering the cost of implementing the urban runoff programs, it is also important to consider the alternative costs incurred by not fully implementing the programs, as well as the benefits that result from program implementation.

It is very difficult to ascertain the true cost of implementation of the Permittees' urban runoff management programs because of inconsistencies in reporting by the Permittees. Reported costs of compliance for the same program element can vary widely from Permittee to Permittee, often by a very wide margin that is not easily explained.² Despite these problems, efforts have been made to identify urban runoff management program costs, which can be helpful in understanding the costs of program implementation.

In 1999, U.S. EPA reported on multiple studies it conducted to determine the cost of urban runoff management programs. A study of Phase II municipalities determined that the annual cost of the Phase II program was expected to be \$9.16 per household. U.S. EPA also studied 35 Phase I municipalities, finding costs to be similar to those anticipated for Phase II municipalities, at \$9.08 per household annually.³

A study on program cost was also conducted by the Los Angeles Regional Water Quality Control Board (LARWQCB), where program costs reported in the municipalities' annual reports were assessed. The LARWQCB estimated that average per household cost to implement the MS4 program in Los Angeles County was \$12.50.

The State Water Board also commissioned a study by the California State University, Sacramento, to assess costs of the Phase I MS4 program. This study is current and includes an assessment of costs incurred by the City of Encinitas in implementing its program. Annual cost per household in the study ranged from \$18-46, with the City of Encinitas representing the upper end of the range.⁴ The cost of the City of Encinitas' program is understandable, given the City's coastal location, reliance on tourism, and consent decree with environmental groups regarding its program. For these reasons, as well as the general recognition the City of Encinitas receives for implementing a superior program, the City's program cost can be considered as the high end of the spectrum for Permittee urban runoff management program costs.

² LARWQCB, 2003. Review and Analysis of Budget Data Submitted by the Permittees for Fiscal Years 2000-2003.p.2

³ Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791-68792.

⁴ State Water Board, 2005. NPDES Stormwater Cost Survey. P. ii

It is important to note that reported program costs are not all attributable to compliance with MS4 permits. Many program components, and their associated costs, existed before any MS4 permits were issued. For example, street sweeping and trash collection costs cannot be solely or even principally attributable to MS4 permit compliance, since these practices have long been implemented by municipalities. Therefore, true program cost resulting from MS4 permit requirements is some fraction of reported costs. The California State University, Sacramento study found that only 38% of program costs are new costs fully attributable to MS4 permits. The remainder of program costs were either pre-existing or resulted from enhancement of pre-existing programs.⁵ The County of Orange found that even lesser amounts of program costs are solely attributable to MS4 permit compliance, reporting that the amount attributable to implement its Drainage Area Management Plan, its municipal stormwater permit requirements, is less than 20% of the total budget. The remaining 80% is attributable to pre-existing programs.⁶

It is also important to acknowledge that the vast majority of costs that will be incurred as a result of implementing the Order are not new. Urban runoff management programs have been in place in this region for over 25 years. Any increase in cost to the Permittees will be incremental in nature.

Urban runoff management programs cannot be considered in terms of their costs only. The programs must also be viewed in terms of their value to the public. For example, household willingness to pay for improvements in fresh water quality for fishing and boating has been estimated by U.S. EPA to be \$158-210 annually or \$13 - \$17.50 monthly.⁷ This estimate can be considered conservative, since it does not include important considerations such as marine waters benefits, wildlife benefits, or flood control benefits. The California State University, Sacramento, study corroborates U.S. EPA's estimates, reporting annual household willingness to pay for statewide clean water to be \$180 or \$15 monthly.⁸ When viewed in comparison to household costs of existing urban runoff management programs, these household willingness to pay estimates exhibit that per household costs incurred by Permittees to implement their urban runoff management programs remain reasonable.

Another important way to consider urban runoff management program costs is to consider the implementation cost in terms of costs incurred by not improving the programs. Urban runoff in southern California has been found to cause illness in people bathing near storm drains.⁹ A study of south Huntington Beach and north Newport Beach found that an illness rate of about 0.8% among bathers at those beaches resulted in about \$3 million annually in health-related expenses.¹⁰ Extrapolation of such numbers to the beaches and other water contact recreation in San Francisco Bay and the tributary creeks of the region could result in huge expenses to the public.

⁵ Ibid. P. 58.

⁶ County of Orange, 2000. A NPDES Annual Progress Report. P. 60. More current data from the County of Orange is not used in this discussion because the County of Orange no longer reports such information.

⁷ Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68793.

⁸ State Water Board, 2005. NPDES Stormwater Cost Survey. P. iv.

⁹ Haile, R.W., et al, 1996. An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay. Santa Monica Bay Restoration Project.

¹⁰ Los Angeles Times, May 2, 2005. Here's What Ocean Germs Cost You: A UC Irvine Study Tallies the Cost of Treatment and Lost Wages for Beachgoers Who Get Sick.

Urban runoff and its impact on receiving waters also places a cost on tourism. The California Division of Tourism has estimated that each out-of-state visitor spends \$101.00 a day. The experience of Huntington Beach provides an example of the potential economic impact of poor water quality. Approximately 8 miles of Huntington Beach were closed for two months in the middle of summer of 1999, impacting beach visitation and undoubtedly impacting the local economy.

Finally, it is important to consider the benefits of urban runoff management programs in conjunction with their costs. A study conducted by USC/UCLA assessed the costs and benefits of implementing various approaches for achieving compliance with the MS4 permits in the Los Angeles Region. The study found that non-structural systems would cost \$2.8 billion but provide \$5.6 billion in benefit. If structural systems were determined to be needed, the study found that total costs would be \$5.7 to \$7.4 billion, while benefits could reach \$18 billion.¹¹ Costs are anticipated to be borne over many years – probably ten years at least. As can be seen, the benefits of the programs are expected to considerably exceed their costs. Such findings are corroborated by U.S. EPA, which found that the benefits of implementation of its Phase II stormwater rule would also outweigh the costs.¹²

Considering the above, the Water Board finds that the requirements in this Order are reasonably necessary to protect beneficial uses identified in the Basin Plan and the economic information related to costs of compliance supports protecting those beneficial uses.

V. RELEVANT STATUTES, REGULATIONS, PLANS AND POLICIES

A. Legal Authorities.

This Order is issued pursuant to section 402 of the CWA and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the CWC (commencing with section 13370). This Order serves as an NPDES permit for point source discharges to surface waters. This Order also serves as waste discharge requirements pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260).

In addition to the legal authority citations below, they are also provided with each permit provision in this Fact Sheet.

CWA 402(p)(3)(B)(ii) – The CWA requires in section 402(p)(3)(B)(ii) that permits for discharges from municipal storm sewers “shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers.”

CWA 402(p)(3)(B)(iii) – The CWA requires in section 402(p)(3)(B)(iii) that permits for discharges from municipal storm sewers “shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.”

¹¹ LARWQCB, 2004. Alternative Approaches to Stormwater Control.

¹² Federal Register / Vol. 64, No. 235 / Wednesday, December 8, 1999 / Rules and Regulations. P. 68791.

40 CFR 122.26(d)(2)(i)(B,C,E, and F) – Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B,C,D,E, and F) require that each Permittee’s permit application “shall consist of: (i) Adequate legal authority. A demonstration that the applicant can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the applicant at a minimum to: [...] (B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer; (C) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water; (D) Control through interagency agreements among co-applicants the contribution of pollutants from one portion of the municipal system to another portion of the municipal system; (E) Require compliance with condition in ordinances, permits, contracts or orders; and (F) Carry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.”

40 CFR 122.26(d)(2)(iv) – Federal NPDES regulation 40 CFR 122.26(d)(2)(iv) requires “a comprehensive planning process which involves public participation and where necessary intergovernmental coordination, to reduce the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate. The program shall also include a description of staff and equipment available to implement the program. [...] Proposed programs may impose controls on a system wide basis, a watershed basis, a jurisdiction basis, or on individual outfalls. [...] Proposed management programs shall describe priorities for implementing controls.”

40 CFR 122.26(d)(2)(iv)(A -D) – Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A - D) require municipalities to implement controls to reduce pollutants in urban runoff from new development and significant redevelopment, construction, and commercial, residential, industrial, and municipal land uses or activities. Control of illicit discharges is also required.

CWC 13377 – CWC section 13377 requires that “[n]otwithstanding any other provision of this division, the state board or the regional boards shall, as required or authorized by the CWA, as amended, issue waste discharge requirements and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitation necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.”

B. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The CWA requires the Water Board to establish water quality standards for each water body in its region. Water quality standards include beneficial uses, water quality objectives and criteria that are established at levels sufficient to protect beneficial uses, and an antidegradation policy to prevent degrading of waters. The Water Board adopted the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs

and policies to achieve those objectives for all waters addressed through the plan. The Urban Runoff Management, Comprehensive Control Program section of the Basin Plan requires the Permittees to address existing water quality problems and prevent new problems associated with urban runoff through the development and implementation of a comprehensive control program focused on reducing current levels of pollutant loading to storm drains to the maximum extent practicable. The Basin Plan's comprehensive program requirements are designed to be consistent with federal regulations (40 CFR Parts 122-124) and are implemented through issuance of NPDES permits to owners and operators of MS4s. Pursuant to Water Code sections 13263 and 13377, the requirements in this Order implement the Basin Plan.

2. Water Quality Control Plan for Ocean Waters of California, California Ocean Plan

In 1972, the State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan). The State Water Board adopted the most recent amended Ocean Plan on October 16, 2012, and it was approved by the Office of Administrative Law and USEPA. The Ocean Plan is applicable, in its entirety, to ocean waters of the state. In order to protect beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Pursuant to Water Code sections 13263 and 13377, the requirements of this Order implement the Ocean Plan.

The Ocean Plan prohibits the discharge of waste to designated Areas of Special Biological Significance (ASBS). ASBS are ocean areas designated by the State Water Board as requiring special protection through the maintenance of natural water quality. The California Ocean Plan states that the State Water Board may grant an exception to California Ocean Plan provisions where the State Water Board determines that the exception will not compromise protection of ocean waters for beneficial uses and the public interest will be served. In 2012, the State Water Board adopted Resolutions 2012-0012 and 2012-0031 (ASBS Exception), which grant an exception to the Ocean Plan prohibition on discharges to ASBS for a limited number of applicants, including San Mateo County for stormwater discharges into the James V. Fitzgerald Marine Reserve ASBS. The ASBS Exception contains "Special Protections" to maintain natural water quality and protect the beneficial uses of the ASBS. In order to legally discharge into an ASBS, San Mateo County must comply with the terms of the Special Protections and obtain coverage under this Order. This Order incorporates the terms of the Special Protections for San Mateo's discharges into the ASBS.

3. National Toxics Rule (NTR) and California Toxics Rule (CTR). U.S. EPA adopted the NTR on December 22, 1992, and amended it on May 4, 1995 and November 9, 1999. About 40 criteria in the NTR apply in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and incorporated the previously adopted NTR criteria that applied in the State. U.S. EPA amended the CTR on February 13, 2001. These rules contain water quality criteria for priority pollutants.

4. Antidegradation Policy. Federal regulations (40 CFR 131.12) require that the state water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining the Quality of the Waters of the State"). State Water Board Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law.

The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. Resolution No. 68-16 and 40 CFR section 131.12 require the Water Board to maintain high quality waters of the State unless degradation is justified based on specific findings. First, the Water Board must ensure that "existing instream uses and the level of water quality necessary to protect the existing uses" are maintained and protected. Second, if the baseline quality of a water body for a given constituent exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected through the requirements of the Order unless the Water Board makes findings that (1) any lowering of the water quality is necessary to accommodate important economic or social development in the area in which the waters are located; (2) water quality adequate to protect existing uses fully is assured; and (3) the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control are achieved.

The Water Board must also comply with any requirements of State Water Board Resolution No. 68-16 beyond those imposed through incorporation of the federal antidegradation policy. In particular, the Water Board must find that not only present, but also anticipated future uses of water are protected, and must ensure best practicable treatment or control of the discharges. The baseline quality considered in making the appropriate findings is the best quality of the water since 1968, the year of the adoption of Resolution No. 68-16, or a lower level if that lower level was allowed through a permitting action that was consistent with the federal and state antidegradation policies. The discharges permitted in this Order are consistent with the antidegradation provisions of 40 CFR section 131.12 and Resolution 68-16 as set out below:

- a. Many of the waters within the area covered by this Order are impaired and by multiple pollutants discharged through MS4s and are not high quality waters with regard to these pollutants. In most cases, there are insufficient data to determine whether these water bodies were impaired as early as 1968, but the limited available data shows impairment dating back for more than two decades. Many such water bodies are listed on the State's CWA Section 303(d) List and the Water Board has established TMDLs to address the impairments (see V.6). This Order ensures that instream (beneficial) water uses and the level of water quality necessary to protect the existing uses is maintained and protected. This Order requires the Permittees to comply with permit provisions to implement the wasteload allocations set forth in the TMDLs in order to restore the beneficial uses of the impaired water bodies

consistent with the assumptions and requirements of the TMDLs. This Order further requires compliance with receiving water limitations to meet water quality standards in the receiving water either by showing compliance or by implementing actions to comply with water-quality based requirements (limitations) set forth in specific pollutants of concern provisions.

- b. To the extent that some of the water bodies within the area covered by this Order are high quality waters with regard to some constituents, the Board finds as follows:

Allowing limited degradation of high quality water bodies through MS4 discharges is necessary to accommodate important economic or social development in the area and is consistent with the maximum benefit to the people of the state. The discharge of stormwater in certain circumstances is to the maximum benefit to the people of the State because it can assist with maintaining instream flows that support beneficial uses, may spur the development of multiple-benefit projects, and may be necessary for flood management, and public safety as well as to accommodate development in the area. The alternative – capturing all stormwater from all storm events – would be an enormous opportunity cost that would preclude MS4 permittees from spending substantial funds on other important social needs. The Order ensures that any limited degradation does not affect existing and anticipated future uses of the water and does not result in water quality less than established standards. The Order requires compliance with receiving water limitations that act as a floor to any limited degradation.

The Order requires the highest statutory and regulatory requirements and requires that the Permittees meet best practicable treatment or control. The Order prohibits all non-stormwater discharges, with a few enumerated exceptions, through the MS4 to the receiving waters. As required by 40 CFR section 122.44(a), the Permittees must comply with the “maximum extent practicable” technology-based standard set forth in CWA section 402(p), and implement extensive minimum control measures in a stormwater management program. Recognizing that best practicable treatment or control may evolve over time, the Order includes new and more specific requirements as compared to Order No. R2-2009-0074.

5. Anti-backsliding Regulations. Section 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. While this Order allows implementation of alternative compliance paths in Provisions C.9 to C.12 and C.1 to comply with receiving water limitations for pollutants and receiving waters identified therein, the availability of the alternatives and the corresponding availability of additional time to come into compliance with receiving water limitations does not violate the anti-backsliding provisions.

The receiving water limitations provisions of this Order are imposed under section 402(p)(3)(B) of the Clean Water Act rather than based on best professional judgment, or based on section 301(b)(1)(C) or sections 303(d) or (e), and are, accordingly, not subject to the anti-backsliding requirements of section 402(o). Although the non-applicability is less clear with respect to the regulatory anti-backsliding provisions in 40 CFR 122.44(l), the regulatory history suggests that USEPA's intent was to establish the anti-backsliding regulations with respect to evolving technology standards for traditional point sources. (See, e.g., 44 Fed.Reg. 32854, 32864 (Jun. 7, 1979)). Assuming the regulatory anti-backsliding provisions apply, it is not violated for two reasons. First, the actual requirements in Provisions C.9 to C.12 and C.14 are as or more stringent than the requirements in the previous permit. Second, to the extent explicitly allowing compliance with the receiving water limitations through implementation of C.9 to C.12 and C.14 is comparable to and less stringent than what the previous permit required, the exception to backsliding based on new information and changed circumstances since the last permit applies.

The alternative compliance paths in Provisions C.9 to C.12 and C.14 of this Order were informed by new information available to the Board from experience and knowledge gained through implementation of actions required by the previous permit and results of source identification studies and control measure effectiveness studies since the adoption of the previous permit. In particular, the Water Board recognizes the need and significance of explicitly allowing time to plan, design, fund, operate and maintain controls necessary to attain water quality improvements and comply with receiving water limitations. This is especially true where, as here, the alternative compliance paths allowed by this Order requires implementation of controls that are more stringent than controls of the previous permit. Thus, even if the receiving water limitations are subject to anti-backsliding requirements, they were revised based on changed circumstances and new information that would support an exception to the anti-backsliding provisions. (40 C.F.R. § 122.44(l)(1); 40 C.F.R. § 122.62(a)(2); 40 C.F.R. §122.44(l)(2)(i)(B)(1)).

6. Impaired Waters on CWA 303(d) List. CWA section 303(d)(1) requires each state to identify specific water bodies within its boundaries where water quality standards are not being met or are not expected to be met after implementation of technology-based effluent limitations on point sources. Water bodies that do not meet water quality standards are considered impaired and are placed on the state's "303(d) List." Periodically, U.S. EPA approves the state's 303(d) List. In October 2011, U.S. EPA approved a revised list of impaired waters prepared pursuant to CWA section 303(d), which requires identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Where it has not done so already, the Water Board plans to adopt Total Maximum Daily Loads (TMDLs) for pollutants on the 303(d) list. TMDLs establish wasteload allocations for point sources and load allocations for non-point sources, and are established to achieve the water quality standards for the impaired waters.

The Water Board has established TMDLs for pesticide-related toxicity, mercury, PCBs, pathogens, among others, to remedy water quality impairments in various water bodies in and around San Francisco Bay. These TMDLs identify MS4 discharges as a source of pollutants to these water bodies, and, as required, establish wasteload allocations (WLAs) for MS4 discharges to reduce the amount of pollutant discharged to receiving waters. CWA section 402(p)(3)(B)(iii) requires the Water Board to impose permit conditions, including: “management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.” Federal regulations also require that NPDES permits contain WQBELs consistent with the assumptions and requirements of all available WLAs (40 CFR 122.44(d)(1)(vii)(B)). CWC sections 13263 and 13377 also require that permits include limitations necessary to implement water quality control plans. Therefore, this Order includes WQBELs and other provisions to implement the TMDL WLAs assigned to Permittees regulated by this Order.

7. California Environmental Quality Act. The action to adopt an NPDES Permit is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) (“CEQA”) pursuant to Water Code section 13389, since the adoption or modification of a NPDES permit for an existing source is statutorily exempt and this Order only serves to implement a NPDES permit (*County of Los Angeles v. State Water Resources Control Board (2006) 143 Cal.App.4th 985*; *Pacific Water Conditioning Assn, Inc. v. City Council of City of Riverside (1977) 73 Cal.App.3d 546, 555-556.*).
8. Endangered Species Act Requirements. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State, including protecting rare, threatened, or endangered species. Each Permittee is responsible for meeting all applicable federal and State Endangered Species Act requirements.

C. State Mandates

Article XIII B, Section 6(a) of the California Constitution provides that whenever “any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service.” The requirements in this Permit do not constitute an unfunded local government mandate subject to subvention under Article XIII B, Section (6) of the California Constitution for several reasons.

First, this Permit implements federally-mandated requirements under CWA section 402, subdivision (p)(3)(B). (33 U.S.C. § 1342(p)(3)(B).) This includes federal

requirements to effectively prohibit non-stormwater discharges, to reduce the discharge of pollutants to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. Federal cases have held that these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (*Natural Resources Defense Council, Inc. v. USEPA* (9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.) The authority exercised under this Permit is not reserved state authority under the CWA's savings clause (cf. *Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements that are not less stringent than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for MS4. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, *City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region* (2006) 135 Cal.App.4th 1377, 1389; *Building Industry Association of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 882-883.)

The requirements of this Permit do not constitute a new program or a higher level of service as compared to the requirements contained in the previous permits. The overarching requirement to impose controls to reduce the pollutants in discharges from MS4s is dictated by the CWA and is not new to this permit cycle (33 USC section 1342(p)(3)(B)). The inclusion of new and advanced measures as the MS4 programs evolve and mature over time is anticipated under the CWA (55 FR 47990, 48052 (Nov. 16, 1990)), and to the extent requirements in this Permit are interpreted as new advanced measures, they do not constitute a new program or higher level of service.

The maximum extent practicable standard under CWA section 402(p)(3)(B)(iii) is a flexible standard that balances a number of considerations, including technical feasibility, cost, public acceptance, regulatory compliance, and effectiveness. (*Building Ind. Ass'n. of San Diego v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 873-874, 889.) Such considerations change over time with advances in technology and with experience gained in stormwater management (55 FR 47990, 48052 (Nov. 16, 1990)). Accordingly, the determination of whether the Permit conditions exceed the requirements of federal law cannot be based on a point by point comparison of the permit conditions and the six minimum measures that are required "at a minimum" to reduce pollutants to the maximum extent practicable and to protect water quality (40 C.F.R. §122.34). Likewise, individual permit provisions cannot be considered in isolation. When implementing the federal requirement to reduce pollutants to the maximum extent practicable, the entire permit must be evaluated as a whole. The Second Appellate District of the Court of Appeal has affirmed this approach in a case that is now pending before the California Supreme Court. (*State Department of Finance v. Commission on State Mandates* (2014) 316 P.3d 1218, review granted (2013) 220 Cal.App.4th 740.)

Furthermore, in the analogous Phase II MS4 context, U.S. EPA has issued an MS4 Permit Improvement Guide (April 2010, available at: http://www.epa.gov/npdes/pubs/ms4permit_improvement_guide.pdf) that

recommends many provisions for Phase II MS4 permits not explicitly specified in the six minimum measures established at Code of Federal Regulations, title 40, section 122.34.

The requirements of the Permit are necessary to reduce the discharge of pollutants to the MEP. The Water Board finds that the requirements of the Permit are practicable, do not exceed federal law, and thus do not constitute an unfunded mandate. These findings are the expert conclusions of the principal state agency charged with implementing the NPDES program in California (CWC sections 13001, 13370). The provisions in this to effectively prohibit non-stormwater discharges are also mandated by the CWA (33 USC section 1342(p)(3)(B)(ii)). Likewise, the provisions of this Permit to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for waterbodies that do not meet federal water quality standards. (33 U.S.C. § 1313(d).) Once U.S. EPA or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable WLA. (40 CFR 122.44(d)(1)(vii)(B).)

Second, the Permittees' obligations under this Permit are similar to the obligations of nongovernmental dischargers who are issued NPDES permits for stormwater discharges. With a few inapplicable exceptions, the CWA regulates the discharge of pollutants from point sources (33 U.S.C. § 1342), and the Porter-Cologne regulates the discharge of waste (Water Code section 13263), both without regard to the source of the pollutant or waste. As a result, the costs incurred by local agencies to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

Third, the Permittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in CWA section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their discharges. To the extent Permittees have voluntarily availed themselves of the Permit, the program is not a state mandate. (Accord *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 107-108.) Likewise, the Permittees have voluntarily sought a program-based municipal stormwater permit in lieu of a numeric limits approach. (See *City of Abilene v. U.S. EPA* (5th Cir. 2003) 325 F.3d 657, 662-663 [noting that municipalities can choose between a management permit or a permit with numeric limits].) The Permittees' voluntary decision to file a Report of Waste Discharge proposing a program-based permit is a voluntary decision not subject to subvention. (See *Environmental Defense Center v. U.S. EPA* (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fourth, the Permittees' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under State law predates the enactment of Article XIII B, Section (6) of the California Constitution.

Finally, even if any of this Permit's provisions could be considered unfunded mandates, under Government Code section 17556, subdivision (d), a state mandate is not subject to reimbursement if the local agency has the authority to charge a fee. The Permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order, subject to certain voting requirements contained in the California Constitution. (See Cal. Const., Art. XIII D, section 6, subd. (c); see also *Howard Jarvis Taxpayers Ass'n v. City of Salinas* (2002) 98 Cal.App.4th 1351, 1358-1359.) The Fact Sheet demonstrates that numerous activities contribute to the pollutant loading in the MS4. Permittees can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., *Apartment Association of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487-488.)

D. Statewide General Industrial and Construction Stormwater Permits

The State Water Board has issued NPDES general permits for the regulation of stormwater discharges associated with industrial activities and construction activities. To effectively implement the New Development (and significant redevelopment) and Construction Controls, Illicit Discharge Controls, and Industrial and Commercial Discharge Controls components in this Permit, the Permittees will conduct investigations and local regulatory activities at industrial and construction sites covered by these general permits. However, under the CWA, the Water Board cannot delegate its own authority to enforce these general permits to the Permittees. Therefore, Water Board staff intends to work cooperatively with the Permittees to ensure that industries and construction sites within the Permittees' jurisdictions are in compliance with applicable general permit requirements and are not subject to uncoordinated stormwater regulatory activities.

E. Regulated Parties

Each of the Permittees listed in this Permit owns or operates a MS4, through which it discharges urban runoff into waters of the United States within the San Francisco Bay Region. These MS4s fall into one or more of the following categories: (1) a medium or large MS4 that services a population of greater than 100,000 or 250,000 respectively; or (2) a small MS4 that is "interrelated" to a medium or large MS4; or (3) an MS4 which contributes to a violation of a water quality standard; or (4) an MS4 which is a significant contributor of pollutants to waters of the United States.

F. Permit Coverage

The Permittees each have jurisdiction over and maintenance responsibility for their respective MS4s in the Region. Federal, State or regional entities within the Permittees' boundaries, not currently named in this Permit, operate storm drain facilities and/or discharge stormwater to the storm drains and watercourses covered

by this Permit. The Permittees may lack jurisdiction over these entities. Consequently, the Water Board recognizes that the Permittees should not be held responsible for such facilities and/or discharges. The Water Board will consider such facilities for coverage under NPDES permitting pursuant to U.S. EPA Phase II stormwater regulations. Under Phase II, the Water Board intends to permit these federal, State, and regional entities through use of a statewide Phase II NPDES General Permit.

VI. PERMIT PROVISIONS

A. Discharge Prohibitions

Prohibition A.1. Legal Authority – CWA 402(p)(3)(B)(ii) – The CWA requires in section 402(p)(3)(B)(ii) that permits for discharges from municipal storm sewers “shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers.”

Prohibition A.2. Legal Authority – San Francisco Bay Basin Plan, Chapter 4 Implementation, Table 4-1, Prohibition 7.

B. Receiving Water Limitations

Receiving Water Limitation B.1. Legal Authority – San Francisco Bay Basin Plan, Chapter 3, Water Quality Objectives.

Receiving Water Limitation B.2. Legal Authority – Federal regulations require each NPDES permit to include limitations necessary to achieve water quality standards. 40 CFR 122.44(d)(1)(i). The State Water Board has previously determined that limitations necessary to meet water quality standards are appropriate for the control of pollutants discharged by MS4s and must be included in MS4 permits. (State Water Board Orders WQ 91-03, 98-01, 99-05, and 2001-15).). This Order accordingly requires that discharges shall not cause or contribute to violations of water quality standards.

C. Provisions

C.1. Compliance with Discharge Prohibitions and Receiving Water Limitations

Legal Authority

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC sections 13377 and 13263, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: The Water Board’s Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) contains water quality objectives as well as the following waste discharge prohibition: “The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of

pollution, contamination, or nuisance as defined in California Water Code Section 13050, is prohibited.”

California Water Code section 13050(l) states “(1) ‘Pollution’ means an alteration of the quality of waters of the state by waste to a degree which unreasonably affects either of the following: (A) The water for beneficial uses. (B) Facilities which serve beneficial uses. (2) ‘Pollution’ may include “contamination.”

California Water Code section 13050(k) states “‘Contamination’ means an impairment of the quality of waters of the state by waste to a degree which creates a hazard to public health through poisoning or through the spread of disease. ‘Contamination’ includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.”

California Water Code section 13050(m) states “‘Nuisance’ means anything which meets all of the following requirements: (1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property. (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal. (3) Occurs during, or as a result of, the treatment or disposal of wastes.”

California Water Code section 13241 requires each water board to “establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance [...]”

California Water Code Section 13243 provides that a water board, “in a water quality control plan or in waste discharge requirements, may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted.”

California Water Code Section 13263(a) provides that waste discharge requirements prescribed by the water board implement the Basin Plan.

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A -D) require municipalities to implement controls to reduce pollutants in urban runoff from commercial, residential, industrial, and construction land uses or activities.

Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(A -D) require municipalities to have legal authority to control various discharges to their MS4.

Federal NPDES regulation 40 CFR 122.44(d)(1) requires NPDES permits to include any requirements necessary to “[a]chieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director

determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

State Water Board Orders WQ 98-01 and 99-05 are precedential orders that require municipal stormwater permits to not cause or contribute to exceedances of water quality standards in the receiving water. The State Water Board Order 95-01 specifically requires that Provision C.1 include language that Permittees shall comply with discharge prohibitions and receiving water limitations through timely implementation of control measures and other actions to reduce pollutants in the discharges, whereby adopting an iterative approach to complying with the limitations. Courts have held that compliance with the iterative process does not excuse liability for violations of water quality standards. (*Building Industry Assn. of San Diego v. State Water Resources Control Board* (2004) 124 Cal.App.4th 866; *City of Rancho Cucamonga v. Regional Water Quality Control Bd.* (2006) 135 Cal.App.4th 1377; *Natural Resources Defense Council v. County of Los Angeles* (9th Cir. 2011) 673 F.3d 880, rev'd on other grounds sub nom. *Los Angeles County Flood Control Dist. v. Natural Resources Defense Council* (2013) 133 S.Ct. 710, mod. by *Natural Resources Defense Council v. County of Los Angeles* (9th Cir. 2013) 725 F.3d 1194, cert. den. *Los Angeles County Flood Control Dist. v. Natural Resources Defense Council* (2014) 134 S.Ct. 2135.)

State Water Board Order WQ 2015-0075 directs regional water boards to consider reasonable alternative compliance options for meeting receiving water limitations. Order WQ 2015-0075 specifically directs regional water boards to follow the principles stated below when issuing a municipal stormwater permit, unless a board makes a specific showing that application of a given principle is not appropriate for region-specific or permit-specific reasons.

1. The receiving water limitations provisions of Phase I MS4 permits should continue to require compliance with water quality standards in the receiving water and should not deem good faith engagement in the iterative process to constitute such compliance. The Phase I MS4 permits should therefore continue to use the receiving water limitations provisions as directed by State Water Board Order WQ 99-05.
2. The Phase I MS4 permits should include a provision stating that, for water body-pollutant combinations with a TMDL, full compliance with the requirements of the TMDL constitutes compliance with the receiving water limitations for that water body-pollutant combination.
3. The Phase I MS4 permits should incorporate an ambitious, rigorous, and transparent alternative compliance path that allows permittees appropriate time to come into compliance with receiving water limitations without being in violation of the receiving water limitations during full implementation of the compliance alternative.
4. The alternative compliance path should encourage watershed-based approaches, address multiple contaminants, and incorporate TMDL requirements.

5. The alternative compliance path should encourage the use of green infrastructure and the adoption of low impact development principles.
6. The alternative compliance path should encourage multi-benefit regional projects that capture, infiltrate, and reuse stormwater and support a local sustainable water supply.
7. The alternative compliance path should have rigor and accountability. Permittees should be required, through a transparent process, to show that they have analyzed the water quality issues in the watershed, prioritized those issues, and proposed appropriate solutions. Permittees should be further required, again through a transparent process, to monitor the results and return to their analysis to verify assumptions and update the solutions. Permittees should be required to conduct this type of adaptive management on their own initiative without waiting for direction from the regional water board.

Alternative Path to Compliance with Discharge Prohibitions and Receiving Water Limitations for Certain Pollutants

This Order, as did the previous order, goes beyond requiring an open-ended iterative approach to compliance with water quality standards by including pollutant-specific provisions, C.9 through C.12 and C.14, with numerical WQBELs or narrative WQBELs with milestones and deadlines. The provisions and limitations implement adopted TMDL wasteload allocations and the associated implementation plans in the Basin Plan and specify what Permittees must do during the term of the Order to manage discharges of the specific pollutants that may cause or contribute to violations of water quality standards. If complied with, the Permittees will be deemed in compliance with Receiving Water Limitations B.1 and B.2 for these pollutants. The requirements of C.9 through C.12 and C.14 are ambitious and rigorous because they will require Permittees to fully commit to and implement challenging but achievable tasks to ultimately meet water quality objectives, including objective interim numeric effluent limitations. Accordingly, this Order explicitly applies principles 1, 2, and 3 (above) of State Water Board Order WQ 2015-0075 and provides an alternative path to compliance with Discharge Prohibitions and Receiving Water Limitations for the following pollutant – water body combinations: pesticides and pesticide-caused toxicity in all receiving waters (Provision C.9); trash in all receiving waters (Provision C.10); mercury in all San Francisco Bay segments and receiving waters in the Guadaloupe River watershed (Provision C.11); polychlorinated biphenyls (PCBs) in all San Francisco Bay segments (Provision C.12); and fecal indicator bacteria in San Pedro Creek and Pacifica State Beach receiving waters (Provision C.14).

This rigorous compliance alternative also applies Order WQ 2015-0075 principle 4. It implements all applicable TMDL requirements and calls for or allows for implementation of trash, mercury, and PCBs controls in watershed and drainage areas where they are most needed and most likely to be effective and promotes and allows use of controls with multiple pollutant benefits. The watershed-based approach addressing multiple pollutants is not appropriate for the pesticides and pesticide-caused toxicity requirements. Consistent with the TMDL wasteload allocation and implementation plan, these requirements are pollution prevention management practices specific to urban use

pesticides and apply to all watersheds and drainage areas. The fecal indicator bacteria requirements for discharges to San Pedro Creek and Pacifica State Beach receiving waters implement TMDL requirements and call for fecal indicator bacteria-specific pollution prevention controls consistent with current knowledge of sources and activities in the watershed.

Provision C.3 of the Order calls for adoption and implementation of low impact development consistent with Order WQ 2015-0075 principles 5 and 6. The mercury and PCBs provisions (C.11 and C.12) explicitly recognize and call for use of green infrastructure to meet pollutant load reduction requirements. The trash provision allows use of low impact development green infrastructure as full trash capture systems, if appropriately designed, operated, and maintained. Although not directly required in the pesticides and fecal indicator bacteria provisions, low impact development principles and development and implementation of green infrastructure plans, including consideration of multi-benefit regional projects, could also have pesticides and bacteria load reduction benefits.

Consistent with Order WQ 2015-0075 principle 7, each of the pollutant-specific provisions also contain concrete milestones and deadlines and reporting requirements that provide rigor and accountability. All reports, plans, and other required submittals will be made available to all interested parties and input and feedback from interested parties will be considered in the evaluation of all submittals.

The Order also includes monitoring requirements (Provision C.8) to assess water body and watershed conditions and effectiveness of control actions towards attainment of water quality standards and to inform selection and implementation of new control actions or adaptive improvements of control actions.

Consistent with the TMDLs, more time than the term of the Order will be necessary to attain water quality standards for mercury and PCBs. In these cases, the associated Order provision includes an additional requirement for the Permittees to submit a proposed plan of additional or improved control actions and schedule of implementation to attain water quality standards or TMDL wasteload allocations for the Water Board's consideration of numerical or narrative WQBELs in the subsequent order.

This Order also includes specific requirements to control copper in discharges to all San Francisco Bay segments (Provision C.13) in accordance with the Basin Plan implementation plan of the site-specific water quality objectives for copper in these receiving waters. However, the Permittees already comply with Receiving Water Limitations for copper in all San Francisco Bay segments since these copper objectives are attained in these receiving waters.

C.2. Municipal Operations

Legal Authority

The following legal authority applies to Provision C.2:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), California Water Code (CWC) sections 13377 and 13263, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(1) requires “[a] description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(3) requires “[a] description for operating and maintaining public streets, roads and highways and procedures for reducing the impact on receiving waters of discharges from municipal storm sewer systems, including pollutants discharged as a result of deicing activities.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(4) requires “[a] description of procedures to assure that flood management projects assess the impacts on the water quality of receiving waterbodies and that existing structural flood control devices have been evaluated to determine if retrofitting the device to provide additional pollutant removal from storm water is feasible.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(5) requires “[a] description of a program to monitor pollutants in runoff from operating or closed municipal landfills or other treatment, storage or disposal facilities for municipal waste, which shall identify priorities and procedures for inspections and establishing and implementing control measures for such discharges.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(6) requires “[a] description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

Fact Sheet Findings in Support of Provision C.2

- C.2-1** Municipal maintenance activities are potential sources of pollutants unless appropriate inspection, pollutant source control, and cleanup measures are implemented during routine maintenance works to minimize pollutant discharges to storm drainage facilities.

Sediment accumulated on paved surfaces, such as roads, parking lots, parks, sidewalks, landscaping, and corporation yards, is the major source of point source pollutants found in urban runoff. Thus, Provision C.2 requires the Permittees to designate minimum BMPs for all municipal facilities and activities as part of their ongoing pollution prevention efforts as set forth in this Permit. Such prevention measures include, but are not limited to, activities as described below. The work of municipal maintenance personnel is vital to minimize stormwater pollution because personnel work directly on municipal storm drains and other municipal facilities. Through work such as inspecting and cleaning storm drain drop inlets and pipes and conducting municipal construction and maintenance activities upstream of the storm drain, municipal maintenance personnel are directly responsible for preventing and removing pollutants from the storm drain. Maintenance personnel also play an important role in educating the public and in reporting and cleaning up illicit discharges.

- C.2-2** Road construction and other activities can disturb the soil and drainage patterns to streams in undeveloped areas, causing excess runoff and thereby erosion and the release of sediment. In particular, poorly designed roads can act as man-made drainages that carry runoff and sediment into natural streams, impacting water quality.

Provision C.2 also requires the Permittees to implement effective BMPs for the following rural works maintenance and support activities: (a) Road design, construction, maintenance, and repairs in rural areas that prevent and control road-related erosion and sediment transport; (b) Identification and prioritization of rural roads maintenance on the basis of soil erosion potential, slope steepness, and stream habitat resources; (c) Road and culvert construction designs that do not impact creek functions. New or replaced culverts shall not create a migratory fish passage barrier, where migratory fish are present, or lead to stream instability; (d) Development and implementation of an inspection program to maintain road structural integrity and prevent impacts to water quality; (e) Provide adequate maintenance of rural roads adjacent to streams and riparian habitat to reduce erosion, replace damaging shotgun culverts, re-grade roads to slope outward where consistent with road engineering safety standards, and install water bars; and (f) When replacing existing culverts or redesigning new culverts or bridge crossings use measures to reduce erosion, provide fish passage and maintain natural stream geomorphology in a stable manner.

Road construction, culvert installation, and other rural maintenance activities can disturb the soil and drainage patterns to streams in undeveloped areas, causing excess runoff and thereby erosion and the release of sediment. Poorly

designed roads can act as preferential drainage pathways that carry runoff and sediment into natural streams, impacting water quality. In addition, other rural public works activities, including those the BMP approach would address, have the potential to significantly affect sediment discharge and transport within streams and other waterways, which can degrade the beneficial uses of those waterways. This Provision would help ensure that these impacts are appropriately controlled.

Specific Provision C.2 Requirements

Provision C.2.a-e. (Operation and Maintenance of Municipal Separate Storm Sewer Systems (MS4) facilities) requires that the Permittees implement appropriate pollution control measures during maintenance activities and to inspect and, if necessary, clean municipal facilities, such as conveyance systems, pump stations, and corporation yards, before the rainy season. The requirements will assist the Permittees to prioritize tasks, implement appropriate BMPs, evaluate the effectiveness of the implemented BMPs, and compile and submit annual reports.

Provision C.2.d. (Stormwater Pump Stations) Water Board staff investigated the occurrence of low salinity and dissolved oxygen (DO) conditions in Old Alameda Creek (Alameda County) and Alviso Slough (Santa Clara County) in September and October of 2005. Water Board staff became aware of this problem in their review of receiving water and discharge sampling conducted by the U.S. Geological Survey as part of its routine monitoring on discharges associated with the former salt ponds managed by the U.S. Fish and Wildlife Service in Santa Clara County and the California Department of Fish and Wildlife in Alameda County.

Discharge of black-colored water from the Alvarado pump station to Old Alameda Creek was observed at the time of the data collection on September 7, 2005, confirming dry weather urban runoff as the source of the documented violations of the 5 mg/L (DO) water quality objective. Such conditions were measured again on September 21, 2005.

On October 17, 2005, waters in Alviso Slough were much less saline than the salt ponds and had the lowest documented dissolved oxygen of the summer, suggesting a dry weather urban runoff source. The (DO) sag was detected from surface to bottom at 2.3 mg/L at a salinity of less than 1 part per thousand (ppt), mid-day, when oxygen levels should be high at the surface. The sloughs have a typical depth of 6 feet.

Investigations of these incidents found that stormwater pump stations, universally operated by automatic float triggers, have been confirmed as the cause in at least one instance and may represent an overlooked source of controllable pollution to the San Francisco Bay Estuary and its tidal sloughs. The discharges of dry weather urban runoff from these pump stations were not being managed to protect water quality and surveillance monitoring detected measurable negative water quality consequences of this current state of pump station management.

Pump station discharges are controllable point sources of pollution that are virtually unregulated, causing violations of water quality objectives. Therefore, the Previous Permit required (1) an inventory of pump stations, (2) inspection of pump stations twice a year during the dry season to collect (DO) data and implement corrective actions for DO

at or below 3 milligrams per liter (mg/l), and (3) inspection of pump stations after two storm events during the wet season to collect data on the presence of trash and other water quality parameters.

The Permittees have submitted a list of all pump stations. DO data in annual reports shows that turning on the pumps aerates the water, thereby increasing the DO of the water to at least 3 (mg/l), the minimum DO requirement.

40 CFR 122.26(d)(2)(I)(f) requires Permittees to carry out all inspection, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with permit conditions, including the prohibition on illicit discharges to the MS4. Pump stations, which collect and discharge from the storm drain systems, cannot contribute discharges with dissolved oxygen (DO) level below 3 mg/L. Previous pump station reporting shows that implementation of corrective actions (i.e., BMPs) prior to the pumps, combined with using the pumps to discharge collected water, as opposed to simply allowing it to overflow, aerates the water to a DO level of at least 3 mg/L. Thus, this Permit removes the specific requirements for the monitoring of DO at pump stations and allows the Permittees greater flexibility to ensure that all water discharged from pumps stations is at least 3 mg/l. The reporting requirement has also been removed from this Permit, but Permittees must maintain any sampling records and make them available upon request.

The Previous Permit also wanted to explore the use of the pump stations for trash capture to protect the beneficial uses of the receiving waters. Information collected shows that pump stations as trash capture devices are inefficient because their reservoirs are too small to contain trash. At the same time, many municipalities have installed full and partial trash capture devices at select storm drain inlets.

Provision C.2.f. (Corporation Yard BMP Implementation) requires Permittees to implement the BMP in site-specific Stormwater Pollution Prevention Plans (SWPPPs) to minimize pollutant discharges in stormwater and non-stormwater discharges. The Previous Permit required SWPPPs to be developed and implemented by July 1, 2010. SWPPPs should have specific BMPs for different functions of the corporation yard and provide guidance for frequent mini inspections to ensure that appropriate BMPs are implemented. During the Previous Permit term, Water Board staff and U.S. EPA staff inspected a few of the Permittees' corporation yards and evaluated the corresponding SWPPPs. All inspected corporation yards had actual and/or potential discharges. Most of the countywide programs developed templates for the SWPPPs. Individual Permittees were supposed to customize the template to fit their corporation yards. Some Permittees did not fully customize the SWPPP template. A few Permittees have comprehensive, site-specific SWPPPs. Water Board staff also evaluated this Provision in annual reports. The Previous Permit required routine inspections in different areas of the corporation yard and at least one inspection prior to the start of the rainy season. The intent of the inspection requirement was to have regular mini-inspections and one full corporation yard inspection sometime in late August or in September, right before the start of the rainy season in October, to make sure the corporation yard was clean and all issues were resolved before the start of the rainy season. Some Permittees inspected in the spring or early summer and documented that as the inspection for the year to comply with this

Provision in the annual report due the following September. Other Permittees did not inspect until late fall or winter. Some Permittees documented issues but the annual reports either did not document the corrective actions or corrective actions were implemented weeks or months later. Therefore, this Permit clearly identifies the timeframe of when the annual inspections must occur and requires corrective actions to be implemented before the next rain event, but no longer than 10 business days after the potential and/or actual discharges are discovered. This is consistent with the timeframe for implementation of corrective actions in provisions C.4. and C.5.

C.3. New Development and Redevelopment

Legal Authority

Broad Legal Authority: CWA Sections 402(p)(3)(B)(ii-iii), CWA Section 402(a), CWC Sections 13377 and 13263, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F), 40 CFR 131.12, and 40 CFR 122.26(d)(2)(iv).

Fact Sheet Findings in Support of Provision C.3

- C.3-1** Urban development begins at the land use planning phase; therefore, this phase provides the greatest cost-effective opportunities to protect water quality in new development and redevelopment. When a Permittee incorporates policies and principles designed to safeguard water resources into its General Plan and development project approval processes, it has taken a critical step toward the preservation of local water resources for current and future generations.
- C.3-2** Provision C.3. is based on the premise that Permittees are responsible for considering potential stormwater impacts when making planning and land use decisions. The goal of Provision C.3. is for Permittees to use their planning authority to reduce pollutant discharges and runoff flow into the storm drain system primarily through the implementation of low impact development (LID) techniques.
- C.3-3** To accomplish this goal, Permittees shall require new development and redevelopment projects to implement appropriate source control, site design, and stormwater treatment measures to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flow from these projects. Permittees shall also complete and implement a Green Infrastructure Plan for the inclusion of low impact development drainage design into storm drain infrastructure on public and private lands, including streets, roads, storm drains, parking lots, building roofs and other storm drain infrastructure elements. Neither Provision C.3. nor any of its requirements are intended to restrict or control local land use decision-making authority.
- C.3-4** Certain control measures implemented or required by Permittees for urban runoff management might create a habitat for vectors (e.g., mosquitoes and rodents) if not properly designed or maintained. Close collaboration and cooperative efforts among Permittees, local vector control agencies, Water Board staff, and the State Department of Public Health are necessary to minimize potential nuisances and public health impacts resulting from vector breeding.
- C.3-5** The Water Board recognized in its Policy on the Use of Constructed Wetlands for Urban Runoff Pollution Control (Resolution No. 94-102) that urban runoff treatment wetlands that are constructed and operated pursuant to that Resolution and are constructed outside a creek or other receiving water are stormwater treatment systems and, as such, are not waters of the United States subject to

regulation pursuant to Sections 401 or 404 of the federal Clean Water Act. This is consistent with the stayed 2015 Clean Water Rule exempting stormwater control features from the definition of “waters of the U.S.” (80 Fed. Reg. 37054 (June 29, 2015).) Water Board staff is working with the California Department of Fish and (CDFW) and U.S. Fish and Wildlife Service (USFWS) to identify how maintenance for stormwater treatment controls required under permits such as this Permit can be appropriately streamlined, given CDFW and USFWS requirements, and particularly those that address special status species. This Permit requires Permittees to ensure that constructed wetlands installed by Regulated Projects are consistent with Resolution No. 94-102 and the operation and maintenance requirements contained therein.

- C.3-6** The Permit requires Permittees to ensure that pervious pavement systems of 3000 square feet or more, onsite, joint, and offsite stormwater treatment systems, and HM controls installed by Regulated Projects are properly operated and maintained for the life of the Projects. In cases where the responsible parties for the treatment systems or HM controls have worked diligently and in good faith with the appropriate state and federal agencies to obtain approvals necessary to complete maintenance activities for the treatment systems or HM controls, but these approvals are not granted, the Permittees shall be considered by the Water Board to be in compliance with Provision C.3.h.iv. of the Permit.

Specific Provision C.3 Requirements

Provision C.3.a. (New Development and Redevelopment Performance Standard Implementation) sets forth essentially the same legal authority, development review and permitting, environmental review, training, and outreach requirements that are contained in the previous permit.

Provision C.3.b. (Regulated Projects) establishes the different categories of new development and redevelopment projects that Permittees must regulate under Provision C.3. These categories are defined on the basis of the land use and the amount of impervious surface created and/or replaced by the project because all impervious surfaces contribute pollutants to stormwater runoff and certain land uses contribute more pollutants. Impervious surfaces can neither absorb water nor remove pollutants as the natural, vegetated soil they replaced can. Also, urban development creates new pollution by bringing higher levels of car emissions that are aerially deposited, car maintenance wastes, pesticides, household hazardous wastes, pet wastes, and trash, which can all be washed into the storm sewer.

This permit is a 3rd generation permit containing stormwater treatment requirements for development projects. Past permits have grandfathered development projects approved prior to those permits’ effective dates, essentially exempting the projects and allowing them to provide no or insufficient stormwater treatment. Water Board staff believe a small number of these development projects that were approved more than a decade ago have still not begun construction. A decade is sufficient time to justify requiring the Permittees to revise and update these stagnant development permits to include current LID treatment requirements. Therefore, this provision removes the grandfathering of

development projects approved with no stormwater treatment requirements and that have not begun construction. However, this provision allows exemptions for some of these previously approved projects in situations where the Permittees lack legal authority to retroactively change their previous approvals. This provision also allows some of these previously approved projects to use non-LID stormwater treatment instead of LID treatment because of space constraints.

To confirm that the total number of Projects previously approved without any Provision C.3. compliant stormwater treatment is indeed small, Provision C.3.b.iv.(1) includes a requirement for Permittees to provide in their 2017 Annual Report a complete list of these types of development projects. For each such Project, the Permittee shall indicate the type of stormwater treatment system required or the specific exemption granted, pursuant to Provision C.3.b.i.(2)(a) and (b). This reporting requirement only applies to Permittees that have Projects subject to Provision C.3.b.i.(2).

Regulated Projects approved with non-LID stormwater treatment measures in compliance with the hydraulic sizing criteria of Provision C.3.d. will continue to be grandfathered.

Provision C.3.c (Low Impact Development (LID)) recognizes LID as a cost-effective, beneficial, holistic, integrated stormwater management strategy.¹³ The goal of LID is to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Practices used to adhere to these LID principles include measures such as preserving undeveloped open space, rain barrels and cisterns, green roofs, pervious pavement systems, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes. This is a standard, current, ordinary, and regular practice being implemented in numerous jurisdictions in California, the U.S., and internationally, including: the Permittees' jurisdictions, Los Angeles, San Diego, San Francisco, Portland, OR, Seattle, Minneapolis, Milwaukee, Kansas City, Chicago, New York City, Philadelphia, Auckland, New Zealand, Chinese "sponge cities" such as Wuhan and Changde, and others.

This Provision sets forth a three-pronged approach to LID with source control, site design, and stormwater treatment requirements. The concepts and techniques for incorporating LID into development projects, particularly for site design, have been extensively discussed in BASMAA's Start at the Source manual (1999) and its companion document, Using Site Design Techniques to Meet Development Standards for Stormwater Quality (May 2003), as well as in various other LID reference documents.

Provision C.3.c.i.(1) lists source control measures that must be included in all Regulated Projects as well as some that are applicable only to certain types of

¹³ U.S. EPA, *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices* (Publication Number EPA 841-F-07-006, December 2007)
http://water.epa.gov/polwaste/green/upload/2008_01_02_NPS_lid_costs07uments_reducingstormwatercosts-2.pdf

businesses and facilities. These measures are recognized nationwide as basic, effective techniques to minimize the introduction of pollutants into stormwater runoff.

Provision C.3.c.i.(2)(a) lists site design elements that must be implemented at all Regulated Projects. These design elements are basic, effective techniques to minimize pollutant concentrations in stormwater runoff as well as the volume and frequency of discharge of the runoff. One design element requires each Regulated Project to include at least one site design measure from a list of six that includes recycling of roof runoff, directing runoff into vegetated areas, and installation of pervious pavement systems instead of traditional paving. All these measures serve to reduce the amount of runoff and its associated pollutants being discharged from the Regulated Project.

Provision C.3.c.i.(2)(b) requires the Permittees to collectively develop and adopt design specifications for pervious pavement systems, subject to the Executive Officer's approval. However, this subprovision allows Permittees to reference pervious pavement design specifications previously developed by countywide programs and adopted into countywide stormwater handbooks. Design specifications are necessary because improperly designed and engineered pervious pavement systems may cause flooding and the discharge of insufficiently treated stormwater runoff.

Provision C.3.c.i.(2)(c) requires each Regulated Project to treat 100% of the Provision C.3.d. runoff with LID treatment measures onsite or with LID treatment measures at a joint stormwater treatment facility.

Provision C.3.c.i.(2)(c)(i) defines LID treatment measures as harvesting and use, infiltration, evapotranspiration, or biotreatment.

The Previous Permit required that a properly engineered and maintained biotreatment system may be considered only if it was infeasible to implement harvesting and use, infiltration, or evapotranspiration at a project site. Infeasibility may result from conditions including the following:

- Locations where seasonal high groundwater would be within 10 feet of the base of the LID treatment measure.
- Locations within 100 feet of a groundwater well used for drinking water.
- Development sites where pollutant mobilization in the soil or groundwater is a documented concern.
- Locations with potential geotechnical hazards.
- Smart growth and infill or redevelopment sites where the density and/or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.
- Locations with tight clay soils that significantly limit the infiltration of stormwater.

The Previous Permit also required the Permittees to produce two reports during the permit term. The first report¹⁴ established criteria and procedures for Permittees to follow to implement the hierarchy of LID treatment measures listed above (i.e., harvesting and use, infiltration, and evapotranspiration must be considered prior to biotreatment). The second report¹⁵ reviewed data from two years of the Permittees' Annual Reports to evaluate the results of applying the feasibility / infeasibility criteria. The conclusions of the second report were:

- Infiltration of some runoff is feasible on most projects, although in the clay soils typical of the Bay Area, the amount of runoff that can be infiltrated is unpredictable and highly variable.
- Very few development projects create the quantity and timing of non-potable water demand required to feasibly harvest and use the amount of runoff specified in Provision C.3.d.
- Bioretention facilities, when designed according to the criteria in current Permittee guidance, could infiltrate 40% - 80% of the total runoff, depending on rainfall patterns and facility size. However, the amount of runoff that would be infiltrated over the life of a particular project is variable and unpredictable because of uncertainty in the near-term and long-term infiltration performance of underlying soils. Infiltration can be maximized by ensuring project designs meet current design criteria and by ensuring treatment systems are constructed as designed.

The Permittees completed a "White Paper" on Provision C.3. on February 27, 2015.¹⁶ The White Paper concluded that the pollutant removal performance of biotreatment facilities, overall and on average, is equivalent or better than the likely real-world performance of harvest and use facilities and as good as the likely performance of infiltration facilities when considered over the long term. The White Paper also noted that biotreatment facilities require less maintenance and are less prone to failure than harvest and use facilities, and in some cases, are also preferable to direct infiltration facilities.

Based on the data provided by the above Permittee reports, this Permit removes the Previous Permit's restriction on allowing properly engineered and maintained biotreatment systems only after an infeasibility analysis of harvesting and use, infiltration, or evapotranspiration treatment measures.

Provision C.3.c.i.(2)(c)(ii) requires biotreatment systems to meet minimum performance specifications in order to be considered as LID treatment. This subprovision also requires biotreatment soil media to meet the current minimum specifications developed and included in the Previous Permit.¹⁷ However, this subprovision recognizes that the current soil media specifications may need to be

¹⁴ *Harvest and Use, Infiltration and Evapotranspiration Feasibility/ Infeasibility Criteria Report (2011)*

¹⁵ *Status Report on the Application of Feasibility / Infeasibility Criteria for Low Impact Development (2013)*

¹⁶ BASMAA, February 27, 2015. "White Paper" on Provision C.3 in MRP 2.0: Final Report.

¹⁷ Attachment L of Board Order No. R2-2009-0074, adopted October 14, 2009, and revised November 27, 2011.

modified because of variability in climate, rainfall, and compost composition among the different counties. Therefore, this subprovision allows for the Permittees to collectively (on an all-Permittee scale or countywide scale) develop and adopt revisions to the current soil media minimum specifications, subject to the Executive Officer's approval.

Provision C.3.d (Numeric Sizing Criteria for Stormwater Treatment Systems) lists the hydraulic sizing design criteria that the stormwater treatment systems installed for Regulated Projects must meet. The volume and flow hydraulic design criteria are the same as those required in the Previous Permit. These criteria ensure that stormwater treatment systems will be designed to treat the optimum amount of relatively smaller-sized runoff-generating storms each year. That is, the treatment systems will be sized to treat the majority of rainfall events generating polluted runoff but will not have to be sized to treat the few very large annual storms as well. For many projects, such large treatment systems become infeasible to incorporate into the projects.

Provision C.3.d.iv. defines infiltration devices and establishes limits on the use of stormwater treatment systems that function primarily as infiltration devices. The restriction that infiltration devices have to be deeper than wide has been removed to reflect current design practices. The intent of the Provision is to ensure that the use of infiltration devices, where feasible and safe from the standpoint of structural integrity, must also not cause or contribute to the degradation of groundwater quality at the project sites.

Provision C.3.e (Alternative or In-Lieu Compliance with Provision C.3.b.) recognizes that not all Regulated Projects may be able to install LID treatment systems onsite because of site conditions, such as existing underground utilities, right-of-way constraints, and limited space.

Provision C.3.e.i. This Provision allows any Regulated Project to provide LID treatment for up to 100% of the required Provision C.3.d. stormwater runoff at an offsite location or pay equivalent in-lieu fees to provide LID treatment at a Regional Project, as long as the offsite or Regional Project is in the same watershed as the Regulated Project and constructed within 3 years of the end of construction of the Regulated Project. The 3 years of additional time are allowed because more time may be required to complete construction of offsite and Regional projects because of administrative, legal, and/or construction delays. We acknowledge in some instances, an even longer time may be required to complete construction of Regional Projects because they may involve a variety of public agencies and stakeholder groups and a longer planning and construction phase. Therefore, the timeline for completion of a Regional Project may be extended up to 5 years after the completion of the Regulated Project, with prior Executive Officer approval. Executive Officer approval will be granted contingent upon a demonstration of good faith efforts to implement the Regional Project, such as having funds encumbered and applying for the appropriate regulatory permits.

Provision C.3.e.ii. (Special Projects) When considered at the watershed scale, certain types of smart growth, high density, and transit-oriented development can either reduce existing impervious surfaces, or create less “accessory” impervious areas and auto-related pollutant impacts. Incentive LID Treatment Reduction Credits approved by the Water Board may be applied to these types of Special Projects. This Provision includes specific criteria for determining which types of Regulated Projects may be considered Special Projects and establishes different categories of Special Projects based on size, land use type, and density. Except for Category A, which represents the smallest Special Projects, this Provision also uses location, density, and parking criteria to establish a tiered approach for determining the total LID Treatment Reduction Credit available for any given Special Project. The total available LID Treatment Reduction Credit may be used to reduce the amount of stormwater runoff that must be treated with LID stormwater treatment systems. The remaining amount of stormwater runoff must be treated with one or a combination of the following two specific non-LID treatment systems:

- Tree-box-type high flowrate biofilters
- Vault-based high flowrate media filters

This Provision is the same as in the Previous Permit except for the following three changes:

- Density LID Treatment Reduction Credits are allowed for mixed use development projects, which consist of a mix of residential and commercial land uses, based on density measured by either the dwelling units per acre or floor area ratio. This change acknowledges that mixed use development projects can vary from mostly commercial to mostly residential. The Previous Permit did not accommodate this variability and penalized dense mixed use projects that are mostly residential by restricting density LID Treatment Reduction Credits to only floor area ratio criteria.
- Definitions of gross density and floor area ratio have been included in Provision C.3.b.ii. to aid consistent implementation of this Provision by all Permittees. Gross Density is defined as the total number of residential units divided by the acreage of the entire site area, including land occupied by public right-of-ways, recreational, civic, commercial and other non-residential uses. Floor Area Ratio (FAR) is defined as the ratio of the total floor area on all floors of all buildings at a project site (except structures, floors, or floor areas dedicated to parking) to the total project site area. Gross density and FAR have been purposely defined to include public rights-of-way, recreational, civic, commercial, and other non-residential uses so as to raise the bar for Regulated Projects to qualify for the LID Reduction Credits allowed in Provision C.3.e.ii. That is, these more conservative gross density and FAR values may result in some Regulated Projects qualifying for less LID Reduction Credits or not qualifying at all.

The reporting data for Special Projects under the current permit shows that “lack of space to provide full LID stormwater treatment” is the most frequent reason invoked for why 100% LID treatment onsite is infeasible. Therefore, it is appropriate that the space reserved for public rights-of-way, recreation, civic,

commercial, and other non-residential uses are included in the calculations for gross density and FAR, especially since many of these areas may be used for installation of LID treatment measures.

- To reduce the burden of reporting, the semi-annual reporting of Special Projects that are being considered by Permittees prior to the Permittees granting final planning approval has been reduced to annual, within the Annual Report. Although the frequency of reporting has been reduced, the current reporting requirements for this Provision are unchanged because the data is necessary for Water Board staff to validate the Permittees' analysis of the number and size of potential Special Projects that may be approved during this permit term. Water Board staff intends to use the data collected in the proposed reporting requirements to revise the Special Projects criteria as appropriate for the next permit term.

Provision C.3.f (Alternative Certification of Stormwater Treatment Systems) allows Permittees to have a third-party review and certify a Regulated Project's compliance with the hydraulic design criteria in Provision C.3.d. Some municipalities do not have the staffing resources to perform these technical reviews. The third-party review option addresses this staffing issue. This Provision requires Permittees to make a reasonable effort to ensure that the third-party reviewer has no conflict of interest with regard to the Regulated Project being reviewed.

Provision C.3.g. (Hydromodification Management) requires that certain new development projects manage increases in stormwater runoff flow and volume so that post-project runoff shall not exceed estimated pre-project runoff rates and durations, where such increased flow and/or volume is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force.

Background for Provision C.3.g. Based on Hydrograph Modification Management Plans prepared by the Permittees, the Water Board adopted hydromodification management (HM) requirements for Alameda Permittees (March 2007), Contra Costa Permittees (July 2006), Fairfield-Suisun Permittees (March 2007), Santa Clara Permittees (July 2005), and San Mateo Permittees (March 2007). Those HM requirements are stated in Provision C.3.g., and Attachment C includes maps prepared by the Alameda, Santa Clara, San Mateo, and Fairfield-Suisun Permittees showing areas where HM requirements apply.

The Alameda, Santa Clara and San Mateo Permittees have adapted the Western Washington Hydrology Model¹⁸ for modeling runoff from development project sites, sizing flow duration control structures, and determining overall compliance of such structures and other HM control structures (HM controls) in controlling runoff from the project sites to manage hydromodification impacts as described in the Permit. The adapted model is called the Bay Area Hydrology Model (BAHM).¹⁹ All Permittees may

¹⁸ http://www.ecy.wa.gov/programs/wq/stormwater/wwhm_training/wwhm/wwhm_v2/instructions_v2.html

¹⁹ See www.bayareahydrologymodel.org, Resources.

use the BAHM if its inputs reflect actual conditions at the project site and surrounding area, including receiving water conditions. As Permittees gain experience in designing and operating HM controls, the Programs may make adjustments in the BAHM to improve its function in controlling excess runoff and managing hydromodification impacts. Notification of all such changes shall be given to the Water Board and the public through such mechanism as an electronic email list.

The Contra Costa Permittees have developed sizing charts for the design of flow duration control devices. The Previous Permit allowed the Contra Costa Permittees to conduct a monitoring program to verify the performance of these devices and to identify whether streams to which Contra Costa Permittees discharge may have a different susceptibility to HM impacts, thus justifying a different threshold for control of flows resulting in those impacts. The Contra Costa Permittees submitted an IMP Monitoring Report,²⁰ which found that Contra Costa HM measures generally, but not entirely, met the Previous Permit's HM requirements for the Alameda, Santa Clara, and San Mateo Permittees, and the City of Vallejo. The Contra Costa Permittees did not submit information showing that Contra Costa creeks had a different susceptibility to erosion. That is, they did not submit a justification for using erosion thresholds different than those accepted for the Alameda, Santa Clara, and San Mateo Permittees, and the City of Vallejo. Under the Previous Permit, the Water Board had accepted a higher threshold for control of HM effects (i.e., controlling the range of flows beginning at 20% of the 2-year pre-project peak flow, as opposed to 10% of the 2-year pre-project peak flow). Because this additional information was not submitted, and Contra Costa streams are generally similar to other Bay Area streams, the Permit extends the 10% standard to Contra Costa, and includes requirements for Contra Costa to complete modifications to its HM approach to ensure that projects implement that consistent approach within a specified time.

The Previous Permit Provision C.3.g.v. required the City of Vallejo to complete a hydrograph modification management plan (HMP) by July 1, 2013, in lieu of complying with Previous Permit Provision C.3.g.i-iv. The City submitted its Final HMP on April 24, 2013,²¹ and the HMP was subsequently accepted by Board staff. The Final HMP incorporates the same requirements as for the Alameda, Santa Clara, and San Mateo Permittees. The Permit requires the City to comply with those requirements.

The Fairfield-Suisun Permittees are required to comply with the HM criteria established in this Permit. However, they have a threshold for control of erosive flows that is greater than the other Permittees: 20 percent of the 2-year peak flow. This criterion, which is greater than the criterion allowed for other Bay Area Stormwater Countywide Programs, is based on data collected from Laurel and LedgeWood Creeks and technical analyses of these site-specific data.

The Water Board recognizes that the collective knowledge of management of erosive flows and durations from new and redevelopment is evolving, and that the topics listed below are appropriate topics for further study. Such a study may be initiated by Water Board staff, or the Executive Officer may request that all Bay Region municipal

²⁰ Contra Costa Clean Water Program, September 15, 2013. IMP Monitoring Report: IMP Model Calibration and Validation Project.

²¹ City of Vallejo (Geosyntec), April 2013. Final Hydromodification Management Plan (HMP).

stormwater Permittees jointly conduct investigations as appropriate. Any future proposed changes to the Permittees' HM provisions may reflect improved understanding of these issues:

- Potential incremental costs, and benefits to waterways, from controlling a range of flows up to the 35- or 50-year peak flow, versus controlling up to the 10-year peak flow, as required by this Permit;
- The allowable low-flow (also called Q_{cp} and currently specified as 10–20 percent of the pre-project 2-year runoff from the site) from HM controls;
- The effectiveness of self-retaining areas for management of post-project flows and durations; and/or
- The appropriate basis for determining cost-based impracticability of treating stormwater runoff and controlling excess runoff flows and durations.

Provision C.3.g.i. defines the subset of Regulated Projects that must install hydromodification controls (HM controls). This subset, called HM Projects, are Regulated Projects that create and/or replace one acre or more of impervious surface and are not specifically excluded by the conditions expressed in C.3.g.i.(1)-(3). Those conditions identify areas where the potential for single-project and/or cumulative development hydromodification impacts to creeks is minimal, and thus HM controls are not required. Such areas include creeks that are concrete-lined or significantly hardened (e.g., with concrete) from point of discharge and continuously downstream to their outfall into San Francisco Bay; underground storm drains discharging to the Bay; and construction of infill projects in highly developed watersheds.²² The Alameda, Santa Clara, San Mateo, and Fairfield-Suisun Permittees have developed maps showing where HM controls are required (Attachment C). This Provision requires Permittees that have not previously submitted an HM Applicability Map or equivalent information to prepare and submit that information, acceptable to the Executive Officer, consistent with the requirements of Provision C.3.g.

Provision C.3.g.ii. establishes the standard HM controls that all HM Projects must meet. The HM Standard is based largely on the standards proposed by Permittees in their Hydrograph Modification Management Plans. The method for calculating post-project runoff in regards to HM controls is standard practice in Washington State and is equally applicable in California.

Provision C.3.g.iii. provides a procedure for the Permittees to propose an additional method for demonstrating compliance with HM requirements. This method would directly simulate erosion potential, and would be required to ensure that projects implementing HM controls with this method, if accepted by the Executive Officer, meet the Permit's HM criteria. This provision requires submittal of appropriate analyses demonstrating that the method will substantively comply with HM requirements; it may not be implemented on projects until accepted by the Executive Officer.

²² Within the context of Provision C.3.g., "highly developed watersheds" refers to catchments or sub-catchments that are 70 percent impervious or more.

Provision C.3.g.iv. identifies and defines three methods of hydromodification management.

Provision C.3.g.v. establishes the timeframes for meeting the HM Standard defined in Provision C.3.g.ii.

Provision C.3.g.vi. describes the information required to be collected and/or submitted in the Permittees' Annual Reports regarding HM Projects. This Provision also describes specific required information for Contra Costa Permittees to submit with the 2017 Annual Report.

Provision C.3.h (Operation and Maintenance of Stormwater Treatment Systems) establishes permitting requirements to ensure that proper maintenance for the life of the Regulated Project is provided for all pervious pavement systems of 3,000 square feet or more; onsite, joint, and offsite stormwater treatment systems; and HM controls installed.

This Provision adds a requirement for Permittees to include pervious pavement systems of 3,000 square feet or more in their Operation and Maintenance Agreements, database of Regulated Projects, and inspection checklists. Pervious pavement systems serve as site design measures that directly reduce the amount of impervious surface area and therefore, the size of the stormwater treatment system(s) required to comply with Provision C.3.d. Adequate routine maintenance of pervious pavement systems is essential because clogged systems become impervious and may result in untreated stormwater runoff or additional load on stormwater treatment systems that result in inadequately treated stormwater runoff. To lessen the burden of inspecting so many pervious pavement systems, only those of 3,000 square feet or more are required to be inspected and patios for private-use at single-family homes, townhomes, or condominiums are specifically excluded. In the case of large subdivisions where the total pervious pavement system area is equal to or greater than 3,000 square feet, but the pervious pavement installations are on individual driveways that are less than 3,000 square feet, inspection of a representative number of driveways will suffice.

Provision C.3.h.ii.(6) The Previous Permit required Permittees to inspect at least 20% of all stormwater treatment systems annually, at least 20% of all vault-based systems annually, and every treatment system at least once every 5 years. Permittees have indicated that each inspection of a Regulated Project routinely includes inspection of pervious pavement systems, stormwater treatment systems and HM controls installed at the Project. Therefore, this Provision revises the inspection frequency requirements such that the minimum number of inspections required annually is tied to a percentage of the total number of Regulated Projects, instead of the total number of individual treatment systems and HM controls. This lessens the tracking burden for the Permittees and better reflects the way actual inspections are conducted.

This Provision requires each Permittee to inspect all its Regulated Projects at least once every 5 years and inspect an average of 20%, but no less than 15% of the total number of Regulated Projects annually. This requirement serves to prevent failed or improperly maintained pervious pavement systems, stormwater treatment systems, or

HM controls from going undetected until the 5th year. Neither of these inspection frequency requirements interferes with the Permittees' current ability to prioritize their inspections based on factors such as types of maintenance agreements, owner or contractor maintained systems, maintenance history, past compliance problems at certain Projects, etc.

Provision C.3.h.ii.(6)(d) This Provision allows Permittees to accept third party inspection reports for vault-based stormwater treatment systems in lieu of conducting Permittee inspections, but only if the third party inspections are conducted at least annually, which is the normal frequency for maintenance of these systems. Each third party inspection must be included in the database or tabular format required in Provision C.3.h.ii.(4) and (5) and clearly identified as a third party inspection. Each third party inspection report must document the third party inspection company, date of inspection, condition of the treatment unit(s) at the time of inspection, maintenance activities performed, and appearance of the inside of the vault units (with photos) before and after maintenance.

Provision C.3.h.ii.(7) As the number of Regulated Projects grows, the Permittees' O&M inspection programs must grow as well. Therefore, this Provision requires each Permittee to develop and implement an Enforcement Response Plan (ERP) for O&M inspections. The ERP serves as a reference document for inspection staff so that consistent enforcement actions can be taken to bring development projects into compliance. This Provision establishes minimum requirements for the ERPs. One of these requirements is that corrective actions must be implemented within 30 days after a problem is identified by an inspector. Thirty days is more than adequate time, considering that many of the problems identified in past O&M inspection reports have been lack of maintenance service or build-up of sediment or debris. The correction of such deficiencies should not take more than 30 days. This Provision also allows for greater than 30 days to complete permanent corrective actions, such as installing additional curb cuts and making grading or vegetation improvements.

Provision C.3.h.iv. This Provision sets the implementation dates for adding pervious pavement to Permittees' O&M programs and complying with the revised minimum inspection frequencies to July 1, 2016, so as to align with the Permittees' fiscal years. This allows time for the Permittees to revise their O&M programs and budget for the revisions. This Provision also specifies a July 1, 2017, due date for implementation of an ERP for the same reasons.

Provision C.3.h.v. As in the Previous Permit, this Provision requires the Permittees to maintain a database or equivalent tabular format with detailed information on each O&M inspection and any necessary enforcement actions against Regulated Projects. To lessen the burden of reporting, this Provision only requires summary data on inspections conducted each fiscal year to be reported in the Annual Report, instead of detailed information on each O&M inspection. However, upon request by the Executive Officer, detailed information from the database or tabular format must be submitted.

Provision C.3.i. (Required Site Design Measures for Small Project and Detached Single-Family Homes Projects) contains requirements on single-family home projects that create and/or replace 2,500 square feet or more of impervious surface and small development projects that create and/or replace > 2,500 ft² to <10,000 ft² impervious surface (collectively over the entire project). A detached single-family home project is defined as the building of one single new house or the addition and/or replacement of impervious surface to one single existing house, which is not part of a larger plan of development. This Provision requires these projects to select and implement one or more stormwater site design measures from a list of six. These site design measures are basic methods to reduce the amount and flowrate of stormwater runoff from projects and provide some pollutant removal treatment of the runoff that does leave the projects. Under this Provision, only projects that already require approvals and/or permits under the Permittees' current planning, building, or other comparable authority are regulated. Hence this Provision does not require Permittees to regulate small development and single-family home projects that would not otherwise be regulated under the Permittees' current ordinances or authorities. Water Board staff recognizes that the stormwater runoff pollutant and volume contribution from each one of these projects may be small; however, the cumulative impacts could be significant. This Provision serves to address some of these cumulative impacts in a simple way that will not be too administratively burdensome on the Permittees.

Provision C.3.j. (Green Infrastructure Planning and Implementation) requires Permittees to complete and implement a Green Infrastructure Plan (Plan) for the inclusion of low impact development drainage design into storm drain infrastructure on public and private lands, including streets, roads, storm drains, parking lots, building roofs, and other storm drain infrastructure elements.

The Plan is intended to serve as an implementation guide and reporting tool during this and subsequent Permit terms to provide reasonable assurance that urban runoff Total Maximum Daily Load (TMDL) wasteload allocations (e.g., for the San Francisco Bay mercury and PCBs TMDLs) will be met, and to set goals for reducing, over the long term, the adverse water quality impacts of urbanization and urban runoff on receiving waters. For this Permit term, the Plan is in lieu of expanding the definition of Regulated Projects prescribed in Provision C.3.b.ii. to include all new and redevelopment projects that create or replace 5,000 square feet or more of impervious surface areas and road projects that just replace existing impervious surface area. However, subsequent permits may include different impervious surface thresholds or other criteria for Regulated Projects. The Plan also provides a mechanism to establish and implement alternative or in lieu compliance options for Regulated Projects and to account for and justify Special Projects in accordance with Provision C.3.e.ii.

Over the long term, the Plan is intended to describe how the Permittees will shift their impervious surfaces and storm drain infrastructure from gray, or traditional storm drain infrastructure where runoff flows directly into the storm drain and then the receiving water, to green—that is, to a more-resilient, sustainable system that slows runoff by dispersing it to vegetated areas, harvests and uses runoff, promotes infiltration and

evapotranspiration, and uses bioretention and other green infrastructure practices to clean stormwater runoff.

The Plan shall also identify means and methods to prioritize particular areas and projects within each Permittee's jurisdiction, at appropriate geographic and time scales, for implementation of green infrastructure projects. Further, it shall include means and methods to track the area within each Permittee's jurisdiction that is treated by green infrastructure controls and the amount of directly connected impervious area. As appropriate, it shall incorporate plans required elsewhere within this Permit, and specifically plans required for the monitoring of and to ensure appropriate reductions in trash and PCBs, mercury, and other pollutants. Permittees may comply with any requirement of this Provision through a collaborative effort.

Provision C.3.j.i.(1) This Provision requires each Permittee to prepare a framework or workplan that describes specific tasks and timeframes for developing its Green Infrastructure Plan. The framework or workplan is required to be approved by each Permittee's governing body, mayor, city manager, or county manager by June 30, 2017. This approval process provides assurance to the Water Board that Permittees are committed to the development of the Plan and implementation of green infrastructure.

Provision C.3.j.i.(2) This Provision specifies minimum elements that each Green Infrastructure Plan must contain to ensure that each Plan is robust and appropriately identifies the means and methods that each Permittee will employ to implement green infrastructure over time. These minimum elements (discussed below) are not overly prescriptive, so as to allow Permittees flexibility in developing their Plans.

- (a) A mechanism to prioritize and map areas for potential and planned projects, both public and private, on a drainage-area specific basis. Implementation of these projects is required to be projected over the same timeframes as specified in Provisions C.11. and C.12. for assessing mercury and PCB load reductions because green infrastructure and projects are an acknowledged means of pollutant load reductions. Each Permittee has flexibility in choosing the mechanism as long as it includes criteria for prioritization and outputs that can be incorporated into its long-term planning and capital improvement processes.
- (b) Targets for the amount of impervious surface, from public and private projects, within the Permittee's jurisdiction to be retrofitted over the same timeframes as specified in Provisions C.11. and C.12. for assessing mercury and PCB load reductions. These self-determined targets represent the green infrastructure work that each Permittee has proactively identified will be completed beyond what would be completed in its community anyway.
- (c) A process for tracking and mapping completed projects, public and private, and making the information publicly available. Again, each Permittee has flexibility in what they use to comply with this Provision.
- (d) General guidelines and standard specifications for overall streetscape and project design and construction to ensure that projects have a unified, complete design that implements the range of functions associated with the projects. These

guidelines and standard specifications, while crucial to a Green Infrastructure Plan, already exist in many reference documents for green infrastructure design and are readily available.

- (e) Requirement(s) that projects be designed to meet the treatment and hydromodification sizing requirements in Provisions C.3.c. and C.3.d. In recognition of space and drainage constraints that may occur for public green infrastructure road projects not subject to Provision C.3.b.ii. (i.e., non-Regulated Projects), this Provision allows Permittees to collectively propose a single approach for how to proceed should project constraints preclude fully meeting the C.3.d. sizing requirements. The single approach can include different options to address specific issues, constraints, or scenarios.
- (f) A summary of the planning documents the Permittee has updated or otherwise modified as well as how the Permittee will ensure that green infrastructure requirements will be included in future plans. The purpose of this element is to show that each Permittee is considering green infrastructure in all aspects of its urban planning.
- (g) A workplan to complete prioritized projects identified as part of a Provision C.3.e Alternative Compliance program or part of Provision C.3.j Early Implementation.
- (h) An evaluation of prioritized project funding options, including, but not limited to: Alternative Compliance funds; grant monies, including transportation project grants from federal, state, and local agencies; existing Permittee resources; new tax or other levies; and other sources of funds.

At U.S. EPA's request, Water Board staff has included at the end of this Fact Sheet section an outline of information used in part by MS4 permittees in the Los Angeles area in their preparation of watershed management plans. We recommend that Permittees consider this information as they prepare Green Infrastructure Plans.

Provision C.3.j.i.(5) requires each Permittee to document in its 2017 Annual Report that the framework or workplan for development of its Green Infrastructure Plan was approved by June 30, 2017, as required by Provision C.3.j.i.(1). This Provision also requires each Permittee to submit its Green Infrastructure Plan and documentation of the legal mechanisms to implement the Plan with the 2019 Annual Report. Based on other cities' past experiences in developing Green Infrastructure Plans, Water Board staff believes the deadlines specified provide adequate time for each Permittee to complete the framework or workplan as well as the Green Infrastructure Plan itself. Allowing the entire permit term to complete the Green Infrastructure Plans is too much time and prevents any of the Plans from being used by Board staff to inform the development of the MRP in the next permit term.

Provision C.3.j.ii.(1) requires each Permittee to prepare and maintain a list of green infrastructure projects, public and private, that are already planned for implementation during the permit term and infrastructure projects planned for implementation that have potential for green infrastructure measures.

Provision C.3.j.ii.(2) requires the list to be submitted with each Annual Report along with a summary of planning or implementation status for each public green

infrastructure project and each private green infrastructure project that is not also a Regulated Project under Provision C.3.b.ii. This Provision also requires each Permittee to include a summary of how each public infrastructure project with green infrastructure potential will include green infrastructure measures to the maximum extent practicable during the permit term. For any public infrastructure project where implementation of green infrastructure measures is not practicable, the Permittee is required to submit a brief description of the project and the reasons green infrastructure measures were impracticable to implement.

The purpose of Provision C.3.j.ii. is to ensure that each Permittee is proactively developing green infrastructure projects and including green infrastructure elements into already planned infrastructure projects as much as possible, while the Green Infrastructure Plan is being developed.

Provision C.3.j.iii. requires the Permittees, individually or collectively, to track processes, assemble and submit information, and provide information, materials, and presentations as needed to assist relevant regional, state, and federal agencies to plan, design, and fund green infrastructure measures into local infrastructure projects, including transportation projects.

Provision C.3.j.iv. requires the Permittees, individually or collectively, to develop and implement regionally-consistent methods to track and report implementation of green infrastructure measures including treated area and connected and disconnected impervious area on both public and private parcels within their jurisdictions. The methods shall also address tracking needed to provide reasonable assurance that wasteload allocations for TMDLs, including the San Francisco Bay PCBs and mercury TMDLs, and reductions for trash, are being met.

Attachment A to U.S. EPA's Comments on the May 11, 2015 Tentative Order Suggested Components of Green Infrastructure Plans

Outlined below are some potential ideas for Green Infrastructure (GI) plans to be developed by Bay Area permittees during MRP 2.0. Components provided below primarily arise from Los Angeles Regional Water Board guidance for reasonable assurance in watershed management plans as part of MS4 permit. Many components, but perhaps not all, will be applicable to GI plans for Bay Area. EPA encourages the Water Board to consider these ideas, modify as they deem appropriate, and include similar description of GI framework in the MRP 2.0 Fact Sheet. We recognize the continued partnership of MS4 permittees, the Water Board, EPA, and other stakeholders to discuss these ideas prior to inclusion into final GI plans.

- A. Identify the water quality priorities with watershed.
 1. Include any applicable required water quality milestones and compliance deadlines
 2. Describe watershed features, waterbodies any other relevant environmental setting information
 3. Outline other municipal specific goals to be addressed; e.g., flood risk, sea level protection, groundwater infiltration.
- B. Describe current BMPs and estimate existing pollutant loads
 1. List pollutant sources in watershed
 2. Provide map of major MS4 outfalls
 3. List any current BMPs within watershed (structural and non-structural)
 4. Using existing data (up to 10 yrs), give estimates of pollutant loads from watershed. (could be cone-based if no flow measurements available)
 5. Define on pollutant specific basis
 6. To extent data available and feasible, assess critical condition loads
 7. Describe variability of estimations.
- C. Estimate required pollutant load reductions
 1. To extent feasible, provide estimate of pollutant load reductions, if mass-based then calculate difference between current and allowable loads; if concentration-based then define the two values.
- D. Identify future control measures/BMPs/strategies to be implemented
 1. Describe drainage areas for implementation
 2. Identify control measures for stormwater and non-stormwater discharges; include number, location(s) and type; i.e., structural or non-structural controls, within new development, retrofit of existing development, stream/habitat restoration projects,
 3. Clarify pollutants to be addressed
 4. Define/map location of each control measure in watershed/jurisdiction
 5. Quantify upstream drainage area captured by each BMP
 6. Clarify if municipal effort only, private efforts or public/private projects
 7. Identify if project is within local jurisdiction or regional and describe cities involved.
- E. Provide schedule of implementation
 1. Identify interim milestones and dates for achievement (within this permit cycle)
 2. Identify all future and final dates for achievement

3. Demonstrate that existing and future control measures will yield final pollutant load reductions and/or meet receiving water limits.
- F. Provide Pollutant Reduction Plan
1. Identify compliance points (should be consistent with any existing regulatory compliance locations; e.g., TMDL monitoring sites expected to assess compliance)
 2. Consider assessment locations in association with MS4 outfalls to monitor pollutant load responses due to upstream control measures.
 3. Describe and evaluate selected control measures - appropriate for pollutant and sizing for load capture
 4. Demonstrate selected control measures have reasonable assurance to meet interim/final requirements.
 5. Describe adaptive management process if pollutant milestones are not met and added BMPs are needed
 6. Include timeframe for future re-assessments.
- G. If model used, provide description of watershed model
1. Identify model type; e.g., watershed, receiving water, BMP performance, empirical
 2. Provide (minimum required) model components: input data, parameters, BMP performance parameters, output
 3. Describe model calibration acceptance criteria
 4. Describe efficiency for BMP performance parameters
 5. Demonstrate model outputs for existing pollutant loads will be addressed by combination of control measures/BMPs to achieve final milestones.
- H. Describe corresponding water quality monitoring program
1. Identify parameters of concern, all monitoring sites, sampling frequency (including wet and dry weather events)
 2. Clarify which monitoring sites are MS4 outfalls
 3. Briefly describe analytical methods and QA procedures to support monitoring
 4. Describe any future monitoring locations and anticipated timeframe of data collection
 5. Briefly describe pollutant sources upstream of monitoring sites.
- I. Identify post-implementation tracking assessment efforts
1. Once completed, describe the BMPs implemented, including any modifications from original project design
 2. Describe assessment procedures for evaluating effectiveness of control measure and corresponding pollutant load reductions for each implemented BMP, as necessary
 3. Provide schedule for re-evaluation of BMP load reductions over long term.

C.4. Industrial and Commercial Site Controls

Legal Authority

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC sections 13377 and 13263, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, D, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C) requires “[a] description of a program to monitor and control pollutants in storm water discharges to municipal systems from municipal landfills, hazardous waste treatment, disposal and recovery facilities, industrial facilities that are subject to section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the municipal permit applicant determines are contributing a substantial pollutant loading to the municipal storm sewer system.” Other specific legal authority is cited below.

Specific Provision C.4. Requirements

Provision C.4. has been revised from the Previous Permit so that related topics are grouped together better. A new Provision C.4.d. – Inspections has been created. It essentially consolidates, from the Previous Permit, the inspection requirements in Provision C.4.d. – Inspection Plan and Provision C.4.c. – Enforcement Response Plan.

Provision C.4.a (Legal Authority)

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that each Permittee must demonstrate that it can control “through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity.”

Provision C.4.b (Inspection Plan)

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(C)(1) provides that Permittees must “identify priorities and procedures for inspections and establishing and implementing control measures for such discharges.” The Permit continues to require Permittees to implement an industrial and commercial site controls program to reduce pollutants in runoff from all industrial and commercial sites/sources.

Federal NPDES regulation 40 CFR 122.26(d)(2)(ii) provides that Permittees “[p]rovide an inventory, organized by watershed of the name and address, and a description (such as SIC codes) which best reflects the principal products or services provided by each facility which may discharge, to the municipal separate storm sewer, storm water associated with industrial activity.”

The Permit continues to require Permittees to identify various industrial sites and sources subject to the Industrial General Permit or other individual NPDES permit. U.S. EPA supports the municipalities regulating industrial sites and sources that are already covered by an NPDES permit:

Municipal operators of large and medium municipal separate storm sewer systems are responsible for obtaining system-wide or area permits for their system's discharges. These permits are expected to require that controls be placed on storm water discharges associated with industrial activity which discharge through the municipal system. It is anticipated that general or individual permits covering industrial storm water discharges to these municipal separate storm sewer systems will require industries to comply with the terms of the permit issued to the municipality, as well as other terms specific to the Permittee.²³

And:

Although today's rule will require industrial discharges through municipal storm sewers to be covered by separate permit, USEPA still believes that municipal operators of large and medium municipal systems have an important role in source identification and the development of pollutant controls for industries that discharge storm water through municipal separate storm sewer systems is appropriate. Under the CWA, large and medium municipalities are responsible for reducing pollutants in discharges from municipal separate storm sewers to the maximum extent practicable. Because storm water from industrial facilities may be a major contributor of pollutants to municipal separate storm sewer systems, municipalities are obligated to develop controls for storm water discharges associated with industrial activity through their system in their storm water management program.²⁴

This Permit does not require the Permittees to submit the list of facilities scheduled for inspection each year with annual reports. Instead, Permittees are to add each year's inspection list to the Inspection Plan as part of the annual update to the Inspection Plan. Permittees may choose to keep their annual lists in their databases or in electronic form. The annual lists must be made readily available to Water Board staff or its representatives upon request.

Water Board staff reviewed about 20% of the Permittees' Inspection Plans during the Previous Permit term. A few of those Inspection Plans also provide detailed flow charts or instructions on how to conduct inspections, fill out the inspect forms, execute enforcement actions, conduct follow-up, and fulfill tracking and reporting for the MRP. These comprehensive Inspection Plans help ensure inspection consistency and serve as excellent training documents for new inspection staff.

Provision C.4.c (Enforcement Response Plan) requires the Permittees to implement and update, as needed, their Enforcement Response Plan (ERP) that serves as a reference for inspection staff to take consistent and timely responses to actual or potential stormwater pollution problems discovered in the course of industrial/commercial stormwater inspections. The ERP provides guidance on (1) progressively stricter enforcement to achieve timely compliance, (2) enforcement scenarios, (3) follow-up inspections, (4) referral to another agency, (5) appropriate time periods for

²³ *Federal Register*. Vol. 55, No. 222, Friday, November 16, 1990, Rules and Regulations. P. 48056

²⁴ *Ibid*

implementation of corrective actions, and (6) the roles and responsibilities of staff responsible for implementing the ERP. ERPs are unique to each Permittee. As such, this Permit continues to have broad requirements for the ERP. This allows the individual Permittee maximum flexibility to customize the ERP to fit its legal authority and the way it does business. Corrective actions must be implemented before the next rain event, but no longer than 10 business days after the potential and/or actual discharges are discovered. Short timeframes for implementing corrective actions encourage businesses to take care of the issues promptly, thus prevent mobilizing potential discharges. Permittees must also require immediate cessation of active non-stormwater discharges, timely implementation of corrective actions to clean up the discharge, and implementation of measures to prevent future active discharges.

This Permit standardizes and clarifies the ERP requirements in provisions C.4., C.5, and C.6. to eliminate any ambiguity in the requirements.

Provision C.4.d (Inspections) takes the inspection requirements from the Previous Permit's Provision C.4.b. Inspection Plan and C.4.c. ERP and consolidates them together into this Provision. Inspection frequencies are determined by each Permittee in its Inspection and Enforcement Response Plans.

U.S. EPA guidance states "management programs should address minimum frequency for routine inspections." The U.S. EPA Fact Sheet—Visual Inspection says "[t]o be effective, inspections must be carried out routinely."²⁵

Permittees have asked that this Permit reduce the record keeping and reporting requirements. The specific record keeping requirements are minimal information that needs to be recorded for each inspection and it is essential to document each inspection to develop a history for the facility. Water Board staff evaluations of MS4 programs showed that many Permittees have very comprehensive inspection database records. Annual reports need to provide enough information to show compliance. During the Previous Permit term, annual reports showed few violations for the corresponding number of inspections completed. This did not match with the field inspection experience of Water Board staff. Further investigation showed that some Permittees do not consider potential discharges to be violations.

The Previous Permit exempted verbal warnings from being reported in the annual reports. Water Board staff expected verbal warnings to have very limited use and only given for very minor issues that do not warrant anything in writing. However, from Water Board inspections, and annual report and ERP reviews, we concluded that many Permittees report minimal violations for the number of inspections completed because only observed non-stormwater discharges were considered violations and issued some type of written enforcement action. Potential discharges were all given verbal warnings and it was unclear if these potential discharges were corrected in a timely manner because there was no written documentation on the potential discharges or verbal warnings issued. Examples of potential discharges include housekeeping issues, evidence of actual non-stormwater discharges that are not ongoing during an inspection, lack of BMPs,

²⁵ U.S. EPA. 1999. 832-F-99-046, "Storm Water Management Fact Sheet – Visual Inspection."

inadequate BMPs, and inappropriate BMPs. Potential discharges need timely corrective actions.

Some Permittees feel that a 10-business day window to implement corrective action is not necessary and even unreasonable during the dry months for potential discharges and especially for minor potential discharges. Permittees have the discretion to add a rationale for allowing a longer time period, especially for corrective actions that require things such as capital improvements, revisions to standard operating procedures, and staff training. However, Water Board staff thinks that prompt implementation of corrective actions for most potential discharges minimizes the risk of potential discharges becoming actual discharges when things are knocked over, when the area is hosed with water, and/or during the next rain event. The Water Board staff has been told by a couple of Permittees that they prefer shorter corrective action timeframes because sites tend to take care of them right away versus forgetting about the corrective actions when given a longer corrective action timeframe. Throughout the Previous Permit term, Water Board staff asked Permittees for a list of minor potential discharges. The only minor issue listed was open dumpster/garbage can lids. Water Board staff concurred that open dumpster/garbage can lids is minor, can be corrected immediately, and would not require any additional follow-up. Water Board industrial and construction inspectors consider open dumpster/garbage can lids and small amounts of trash/debris on the ground to be minor violations that can quickly be corrected, because staff at the industrial or construction sites can immediately cover the dumpsters and pick up and appropriately dispose of the trash. Water Board inspectors note those issues and corrective actions in their inspection reports. This Permit now requires reporting of all potential and actual non-stormwater discharges based on the enforcement levels in each Permittee's ERP, so that Water Board staff can evaluate whether Permittees are conducting appropriate followup.

This Permit becomes effective half way through the 2015-2016 reporting year. The reporting requirements for this Permit are slightly different than the reporting requirements for the Previous Permit. In response to the Permittees commenting on the difficulties of reporting under two different permits, this Permit, C.4.d.iii.(1), continues the reporting requirements from the Previous Permit to the end of the 2015-2016 reporting year. The new reporting requirements, C.4.d.iii.(2), become effective the 2016-2017 reporting year.

Provision C.4.f (Staff Training) section of the Permit requires the Permittees to conduct annual staff trainings for inspectors. Trainings are necessary to keep inspectors current on enforcement policies and current MEP BMPs for industrial and commercial stormwater runoff discharges.

C.5. Illicit Discharge Detection and Elimination

Legal Authority

The following legal authority applies to section C.5:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC sections 13377 and 13263, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, D, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulations 40 CFR 122.26(d)(1)(iii)(B)(1) provides that the Permittee shall include in their application “the location of known municipal storm sewer system outfalls discharging to waters of the United States.”

Federal NPDES regulations 40 CFR 122.26(d)(1)(iii)(B)(5) provides that the Permittee shall include in their application “[t]he location of major structural controls for storm water discharge (retention basins, detention basins, major infiltration devices, etc.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B) provides that the Permittee shall have adequate legal authority to “[p]rohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(F) provides that the Permittee shall have adequate legal authority to “[c]arry out all inspection, surveillance and monitoring procedures necessary to determine compliance and noncompliance with permit conditions including the prohibition on illicit discharges to the municipal separate storm sewer.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B) requires that the Permittee have a “description of a program, including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) requires a “program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges to the municipal storm sewer system.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(2) requires a “description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3) requires a “description of procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(4) requires a “description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(5) requires a “description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(7) requires a “description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary.”

Fact Sheet Findings in Support of Provision C.5

- C.5-1** Illicit discharges that are not comprised entirely of stormwater are not authorized to enter the MS4 and are considered to be illicit discharges, unless authorized by a separate NPDES permit, or exempted or conditionally exempted in Provision C.15.
- C.5-2** Every Permittee must have the ability to effectively prohibit non-stormwater discharges to the MS4 by actively detecting and eliminating illicit discharges and disposal into its MS4.
- C.5-3** Illicit discharges to the storm drain system can be detected in several ways. Permittee staff can detect discharges during their course of other tasks, and business owners and other aware citizens can observe and report suspect discharges. The Permittee must have a direct means for these reports of suspected polluted discharges to the MS4 to be received, responded to in a timely manner, and to receive adequate documentation, tracking, and response through problem resolution.

Removal of Routine Collection System Screening Requirement

The Previous Permit required the Permittees to perform routine surveys for illicit discharges and illegal dumping in above ground check points in the collection system including elements that are typically inspected for maintenance purposes, such as end of pipes, creeks, flood conveyances, storm drain inlets, and catch basins, to seek and eliminate illicit connections and discharges. The results of the screenings were reported in annual reports. No illicit connections were reported. However, Permittees have found illicit discharges during the screenings and they were cleaned up. It is unclear if personnel conducting the screenings reported these illicit discharges to the illicit discharge staff for investigation and tracking. We have added language to C.5.c. – Spill, Dumping, and Complaint Response Program to ensure that illicit discharges found by municipal staff conducting routine maintenance and inspection activities on the collection system are reported to the illicit discharge staff for investigation and tracking. This is based on the federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3), which requires “procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.”

Specific Provision C.5 Requirements

Provision C.5.a (Legal Authority) requires each Permittee have adequate legal authority to prohibit illicit discharges to storm sewers as required by federal regulations at 40 CFR 122.26(d)(2)(i)(B). Illicit and inadvertent connections to MS4 systems result in a discharge into the MS4 that is not comprised entirely of stormwater. Every Permittee must have the ability to discover, inspect, enforce its ordinance, track, and clean up stormwater pollution discharges by illicit connections and other illegal discharges to the MS4 system.

Provision C.5.b (ERP) requires Permittees to implement and update, as needed, their ERP to ensure consistent and timely response to illicit discharges and connections to the MS4. The ERP provides guidance on (1) progressively stricter enforcement to achieve timely compliance, (2) follow-up inspection, (3) referral to another agency, (3) appropriate time periods for implementation of corrective actions, and (4) the roles and responsibilities of staff responsible for implementing the ERP. Corrective actions must be implemented before the next rain event, but no longer than 10 business days after the potential and/or actual discharges are discovered. Permittees must also require immediate cessation of active discharges, and timely implementation of corrective actions to clean up the discharge and implementation of measures to prevent future active discharges.

Water Board staff reviewed more than half of the Permittees' ERPs during the Previous Permit term. Almost all of those Permittees have one ERP to satisfy the ERP requirements in provisions C.4., C5., and C.6. While a couple of Permittees have detailed, comprehensive plans, more than half of the ERPs reviewed did not comply with the ERP requirements in the Previous Permit. Therefore, the ERP requirements in this Permit are standardized in provisions C.4., C5., and C.6.

Provision C.5.c (Spill, Dumping, and Complaint Response Program) Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(4) requires "a description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer." This Provision of the Permit requires the Permittees to establish and maintain a central point of contact including phone numbers for spills, dumping, and complaints reporting. Reports from the public and other Permittee staff are an essential tool in discovering and investigating illicit discharge activities into the MS4. Maintaining contact points will help ensure that there is effective reporting to assist with the discovery of prohibited discharges. Each Permittee must have a means to adequately track the suspected polluted discharges from reporting through problem resolution.

Provision C.5.d (Tracking and Case Followup) section of the Permit requires Permittees to track and monitor followup for all incidents and discharges reported to the spills, dumping, and complaint response system that could discharge into the MS4. This requirement is included so Permittees can demonstrate compliance with the ERP requirements in Provision C.5.b and to ensure that illicit discharge reports receive adequate follow up through to resolution.

All municipalities, counties, district, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in California are

required to report sanitary sewer overflows to the California Integrated Water Quality System Project pursuant to the State Water Board's Order No. 2006-003-DWQ (Statewide General Waste Discharge Requirements for Sanitary Sewer Systems) and Order WQ 2013-0058-EXEC (Adopting Amended Monitoring Requirements for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems order. Sewage discharges that are reported to the California Integrated Water Quality System Project do not need to be tracked and reported in Provision C.5.

Provision C.5.e (Control of Mobile Sources) requires each Permittee to implement a program to reduce the discharge of pollutants from mobile businesses. The purpose of this section is to implement oversight and control of pollutants associated with mobile business sources to the MEP. The Previous Permit required Permittees to develop and implement a program to reduce the discharge of pollutants from mobile businesses. Water Board staff evaluated five Permittees' implementation of Provision C.5., which included Provision C.5.e. – Control of Mobile Sources. Water Board staff evaluated one Permittee in each of the five counties with Permittees covered under the Previous Permit. Three of the Permittees evaluated complied with this Provision. It was evident that they had put in the thought and actions to comply. Two of the Permittees evaluated did not comply with this Provision. They were dependent on the county-wide and/or regional programs to implement this Provision for them. The regional program was supposed to expand the existing regional Surface Cleaner Training and Recognition Program to include two new mobile business categories: automotive washing and carpet cleaning; develop marketing materials, training videos, and self-test applications for those two new mobile business categories; create Spanish tracks of the information for each new business type; and create a web-based application to share information about mobile businesses among the Permittees. At the time of the 2013-2014 Annual Report, none of those regional tasks had been completed. In order to understand what Permittees are doing to control pollutants from mobile sources, this Permit continues the requirements of the Previous Permit and collects data on each Permittee's implementation of the provision.

Provision C.5.f (Municipal Separate Storm Sewer System (MS4) Map) As part of the permit application process, federal NPDES regulations 40 CFR 122.26(d)(1)(iii)(B)(1) and 40 CFR 122.26(d)(1)(iii)(B)(5) specify that dischargers must identify the location of any major outfall that discharges to waters of the United States, as well as the location of major structural controls for stormwater discharges. A major outfall is any outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than a circular pipe which is associated with a drainage area of more than 50 acres) or; for areas zoned for industrial activities, any pipe with a diameter of 12 inches or more or its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more). The permitting agency may not process a permit until the applicant has fully complied with the application requirements.²⁶ If, at the time of application, the information is unavailable, the Permit must require implementation of a program to meet the application requirements.²⁷ All Permittees have complied with this requirement. This Permit

²⁶ 40 CFR 124.3 (applicable to state programs, see section 123.25).

²⁷ 40 CFR 122.26(d)(1)(iv)(E).

continues to require the Permittees to advertise the availability of the maps of their MS4 system and to make available these maps to the public upon request.

C.6. Construction Site Control

Legal Authority

The following legal authority applies to section C.6:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC sections 13377 and 13263, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, D, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D) requires “[a] description of a program to implement and maintain structural and non-structural best management practices to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(1) requires “[a] description of procedures for site planning which incorporate consideration of potential water quality impacts.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(2) requires “[a] description of requirements for nonstructural and structural best management practices.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(3) requires “[a] description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(D)(4) requires “[a] description of appropriate educational and training measures for construction site operators.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) provides that each Permittee must demonstrate that it can control, “through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity.”

Federal NPDES regulation 40 CFR 122.26(b)(14) provides that “[t]he following categories of facilities are considered to be engaging in ‘industrial activity’ for the purposes of this subsection: [...] (x) Construction activity including cleaning, grading and excavation activities [...].”

Federal NPDES regulation 40 CFR 122.44(d)(1)(i) requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, non-conventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

Fact Sheet Findings in Support of Provision C.6.

- C.6-1** Vegetation clearing, mass grading, lot leveling, and excavation expose soil to erosion processes and increase the potential for sediment mobilization, runoff and deposition in receiving waters. Construction sites without adequate BMP implementation result in sediment runoff rates that greatly exceed the natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters.
- C.6-2** Excess sediment can cloud the water, reducing the amount of sunlight reaching aquatic plants, clog fish gills, smother aquatic habitat and spawning areas, and impede navigation in our waterways. Sediment also transports other pollutants, such as nutrients, metals, and oils and grease. Permittees are on-site at local construction sites for grading and building permit inspections, and also have in many cases dedicated construction stormwater inspectors with training in verifying that effective BMPs are in place and maintained. Permittees also have effective tools available to achieve compliance with adequate erosion control, such as stop work orders and citations.
- C.6-3** Mobilized sediment from construction sites can flow into the MS4 and then into receiving waters. According to the 2004 National Water Quality Inventory,²⁸ States and Tribes report that sediment is one of the top 10 causes of impairment of assessed rivers and streams, next to pathogens, habitat alteration, organic enrichment or oxygen depletion, nutrients, metals, etc. Sediment impairs 35,177 river and stream miles (14% of the impaired river and stream miles). Sources of sedimentation include agriculture, urban runoff, construction, and forestry. Sediment runoff rates from construction sites, however, are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades.²⁹

Specific Provision C.6 Requirements

Provision C.6.a. Legal Authority for Effective Site Management. Federal NPDES regulation 40 CFR 122.26(d)(2)(i)(A) requires that each Permittee demonstrate that it can control “through ordinance, permit, contract, order or similar means, the contribution of pollutants to the municipal storm sewer by storm water discharges associated with industrial activity and the quality of storm water discharged from site of industrial activity.” This section of the Permit requires each Permittee to have the authority to require year-round, seasonally and phase appropriate effective erosion control, run-on and runoff control, sediment control, active treatment systems, good site management, and non stormwater management through all phases of site grading, building, and finishing of lots. All Permittees should already have this authority.

²⁸ http://www.epa.gov/owow/305b/2004report/2004_305Breport.pdf

²⁹ U.S. EPA. December 2005. *Stormwater Phase II Final Rule Fact Sheet Series – Construction Site Runoff Control Minimum Control Measure*. EPA 833-F-00-008. Fact Sheet 2.6.

In its Phase II Compliance Assistance Guidance, U.S. EPA says that “[i]nspections give the MS4 operator an opportunity to provide additional guidance and education, issue warnings, or assess penalties.”³⁰ To issue warnings and assess penalties during inspections to achieve timely corrective actions from sites, inspectors must have the legal authority to conduct enforcement.

Provision C.6.b. Enforcement Response Plan (ERP). This section requires each Permittee to implement and update, as needed, its Enforcement Response Plan (ERP), which serves as a reference for inspection staff to take consistent actions and timely response to achieve effective, timely corrective compliance from all public and private construction site owners/operators.

U.S. EPA supports enforcement of ordinances and permits at construction sites, stating “[e]ffective inspection and enforcement requires [...] penalties to deter infractions and intervention by the municipal authority to correct violations.”³¹ In addition, U.S. EPA expects permits issued to municipalities to address “weak inspection and enforcement.”³² For these reasons, the enforcement requirements in this section have been established, while providing sufficient flexibility for each Permittee’s unique stormwater program. Prior to the issuance of the Previous Permit, Water Board staff had noted deficiencies in the Permittees’ enforcement procedures and implementation during inspections. The most common issues found were that enforcement was not firm and appropriate to correct the violation, and that repeat violations did not result in escalated enforcement procedures. Therefore, the Previous Permit required Permittees to develop ERPs.

The ERP provides guidance on (1) progressively stricter enforcement to achieve timely compliance, (2) enforcement scenarios, (3) follow-up inspections, (4) referral to another agency, (5) appropriate time periods for implementation of corrective actions, and (6) the roles and responsibilities of staff responsible for implementing the ERP. ERPs are unique to each Permittee. As such, this Permit continues to have broad requirements for the ERP. This allows the individual Permittee maximum flexibility to customize the ERP to fit its legal authority and ordinary business practices. Permittees must require immediate cessation of active non-stormwater discharges, timely implementation of corrective actions to clean up the discharge, and implementation of measures to prevent future active discharges. Corrective actions must be implemented before the next rain event, but no longer than 10 business days after the potential and/or actual discharges are discovered. Construction sites are required by the statewide NPDES General Permit for Stormwater Discharges Associated with Construction Activities (Construction General Permit) to keep supplies on hand to address BMP issues rapidly. In a few cases, such as slope inaccessibility, it may require longer than 10 days before crews can safely access an eroded area. Corrective actions can be temporary and more time can be allowed for permanent corrective actions. The Permittees’ tracking data needs to provide a rationale for the longer compliance timeframe.

³⁰ U.S. EPA. 2000. 833-R-00-002, Storm Water Phase II Compliance Assistance Guide, pp.4-31

³¹ U.S. EPA. 1992. Guidance 833-8-92-002. Section 6.3.2.3.

³² *Federal Register*. Vol. 55, No. 222, Friday, November 16, 1990. Rules and Regulations. p.48058.

Water Board staff reviewed more than half of the Permittees' ERPs during the Previous Permit term. While a couple of Permittees have detailed, comprehensive plans, more than half of the ERPs reviewed did not comply with the ERP requirements in the Previous Permit. Therefore, this Permit standardizes and clarifies the ERP requirements in provisions C.4., C.5., and C.6. to eliminate any ambiguity in the requirements.

Provision C.6.c. Best Management Practices Categories. This section requires all Permittees to require all construction sites to have year-round seasonally appropriate effective BMPs in the following six categories: (1) erosion control, (2) run-on and runoff control, (3) sediment control, (4) active treatment systems, (5) good site management, and (6) non stormwater management. These BMP categories are listed in the Construction General Permit. The Water Board decided it was too prescriptive and inappropriate to require a specific set of BMPs that are to be applicable to all sites. Every site is different with regards to terrain, soil type, soil disturbance, and proximity to a waterbody. The Construction General Permit recognizes these different factors and requires site-specific BMPs through the (SWPPP), which addresses the six specified BMP categories. This Permit similarly allows Permittees the flexibility to determine if the BMPs for each construction site are effective and appropriate. This Permit also allows the Permittees and the project proponents the necessary flexibility to make immediate decisions on appropriate, cutting-edge technology to prevent the discharge of construction pollutants into storm drains, waterways, and rights-of-way. Appropriate BMPs for the different site conditions can be found in different handbooks and manuals. Therefore, this Permit is consistent with the Construction General Permit in its requirements for BMPs in the six specified categories.

Vegetation clearing, mass grading, lot leveling, and excavation expose soil to erosion processes and increase the potential for sediment mobilization, runoff into the MS4, and deposition in receiving waters. Construction sites without adequate BMP implementation result in sediment runoff rates that greatly exceed the natural erosion rates of undisturbed lands, causing siltation and impairment of receiving waters. This can even occur in conjunction with unexpected rain events during the dry season (defined as May 1 through September 30). Although rare, significant rains can occur in the San Francisco Bay Region during the dry season. Therefore, Permittees should ensure that construction sites have materials on hand for rapid rain response during the whole year, including during the dry season.

Normally, stormwater restrictions on grading should be implemented during the wet season from October 1 through April 30. Section C.6.c.ii.(1).d of the Permit requires "project proponents to minimize grading during the wet season and scheduling of grading with seasonal dry weather periods to the extent feasible." If grading does occur during the wet season, Permittees shall require project proponents to (1) implement additional BMPs as necessary, (2) keep supplies available for rapid response to storm events, and (3) minimize wet-season, exposed, and graded areas to the absolute minimum necessary.

Slope stabilization is necessary on all active and inactive slopes during rain events regardless of the season, except in areas implementing advanced treatment. Slope stabilization is also required on inactive slopes throughout the rainy season. These

requirements are necessary because unstabilized slopes at construction sites are significant sources of erosion and sediment discharges during rainstorms. “Steep slopes are the most highly erodible surface of a construction site, and require special attention.”³³ U.S. EPA emphasizes the importance of slope stabilization when it states “slope length and steepness are key influences on both the volume and velocity of surface runoff. Long slopes deliver more runoff to the base of slopes and steep slopes increase runoff velocity; both conditions enhance the potential for erosion to occur.”³⁴ In lieu of vegetation preservation or replanting, soil stabilization is the most effective measure in preventing erosion on slopes. Research has shown that effective soil stabilization can reduce sediment discharge concentrations up to six times, as compared to soils without stabilization.³⁵ Slope stabilization at construction sites for erosion control is already the consensus among the regulatory community and is found throughout construction BMP manuals and permits. For these reasons, Permittees must ensure that slope stabilization is implemented on sites, as appropriate.

It is also necessary that Permittees ensure that construction sites are revegetated as early as feasible. Implementation of revegetation reduces the threat of polluted stormwater discharges from construction sites. Construction sites should permanently stabilize disturbed soils with vegetation at the conclusion of each phase of construction.³⁶ A survey of grading and clearing programs found one-third of the programs without a time limit for permanent revegetation, “thereby increasing the chances for soil erosion to occur.”³⁷ U.S. EPA states “the establishment and maintenance of vegetation are the most important factors to minimizing erosion during development.”³⁸

To ensure the MEP standard and water quality standards are met, active treatment systems may be necessary at some construction sites. Requirements for active system requirements are located in the Construction General Permit, Attachment F.

Provision C.6.d. Plan Approval Process. This section of the Permit requires the Permittees to review project proponents’ stormwater management plans for compliance with local regulations, policies, and procedures. U.S. EPA states that it is often easier and more effective to incorporate stormwater quality controls during the site plan review process or earlier.³⁹ In the Phase I stormwater regulations, U.S. EPA states that a primary control technique is good site planning.⁴⁰ U.S. EPA goes on to note that the most efficient controls result when a comprehensive stormwater management system is in place.⁴¹ To determine if a construction site is in compliance with construction and grading ordinances and permits, U.S. EPA states that the “MS4 operator should review

³³ Schueler, T., and H. Holland. 2000. *Muddy Water In—Muddy Water Out?* The Practice of Watershed Protection. p. 6.

³⁴ U.S. EPA. 1990. *Sediment and Erosion Control: An Inventory of Current Practices*. p. II-1.

³⁵ Schueler, T., and H. Holland. 2000. “Muddy Water In—Muddy Water Out?” *The Practice of Watershed Protection*. p. 5.

³⁶ Ibid.

³⁷ Ibid. p. 11.

³⁸ U.S. EPA. 1990. *Sediment and Erosion Control: An Inventory of Current Practices*. p. II-1.

³⁹ U.S. EPA. 2000. *Storm Water Phase II Compliance Assistance Guide*. EPA 833-R-00-002. Section 6.3.2.1.

⁴⁰ *Federal Register*. Vol. 55, No. 222, Friday, November 16, 1990. Rules and Regulations. p. 48034.

⁴¹ Ibid.

the site plans submitted by the construction site operator before ground is broken.”⁴² Site plan review aids in compliance and enforcement efforts since it alerts the “MS4 operator early in the process to the planned use or non-use of proper BMPs and provides a way to track new construction activities.”⁴³

Provision C.6.e. (Inspections) The Water Board allows flexibility on the legal authority language, ERP, and BMPs required on a site. This section of the Permit pulls together the accountability of the whole Provision through regular inspections, consistent enforcement, and meaningful tracking. These three elements will help ensure that effective construction pollutant controls are in place in order to minimize construction polluted runoff to the storm drain and waterbodies.

This section clearly identifies the level of effort necessary by Permittees to minimize construction pollutant runoff into storm drains and ultimately, waterbodies, including tracking and reporting sufficient to demonstrate and document Permittee compliance.

This section requires monthly inspections during the wet season of all construction sites disturbing one or more acre of land, all hillside projects, and all high priority sites determined by the Permittee or the Water Board to be significant threats to water quality. Inspections must focus on the adequacy and effectiveness of the site-specific BMPs implemented for the six BMP categories. Each Permittee must implement its ERP and require timely corrections of all actual and potential problems observed. All corrective actions must be implemented before the next rain event, but no longer than 10 business days after the violations are discovered. A longer time period to implement corrective actions is allowed with a reasonable rationale. All inspections must be recorded on a written or electronic inspection form, and also tracked in an electronic database or tabular format.

The Previous Permit required Permittees to have the legal authority to require effective construction stormwater controls at all construction sites, regardless of the amount of soil disturbed. Water Board staff has observed disturbed construction sites where minimal BMPs were being implemented, and has seen stormwater transport construction site pollutants into the storm drain. For these reasons, ideally, all construction sites with a grading permit from a Permittee should have stormwater inspections during the rainy season to ensure adequate BMPs are implemented and construction pollutants are not entering the storm drain. Construction sites with steeper slopes pose a more-significant threat of discharging construction-related pollutants to the storm drain because they are likely to have higher runoff velocities and because their BMPs must be more robust and more-robustly installed and maintained in order to control pollutants, as compared to less-steep sites. Water Board staff has observed storm water move sediment and other construction-related pollutants into storm drains at sites ranging from those with flat slopes to those with slopes greater than 15%. Because of the relatively greater threat posed by steeper sites, this Permit adds a specific requirement to inspect all hillside projects disturbing greater than or equal to 5,000 square feet of soil. For those Permittees that do not have a hillside development

⁴² U.S. EPA. 2000. *Storm Water Phase II Compliance Assistance Guide*. EPA 833-R-00-002. Section 4.6.2.4, pp. 4–30.

⁴³ *Ibid.* pp. 4–31.

map or definition, this Permit defines hillside development as development occurring on land with a slope greater than or equal to 15%.

The Previous Permit required Permittees to report the number of violations fully corrected prior to the next event, but no longer than 10 business days after the potential and actual discharges are discovered or otherwise considered corrected in a timely, though longer period. This proved challenging for many Permittees because they track enforcement actions and not discreet violations. While Water Board staff does want to understand how many potential and actual discharges are discovered and resolved in a timely manner, this would require significant changes in databases for some Permittees. The big picture of how many violations or enforcement actions for annual reporting will suffice, as inspection forms are available for more detailed review. Therefore, this Permit allows Permittees to either report by enforcement actions or discreet number of potential and actual discharges.

The Permittees asked that this Permit reduce the reporting since all of the tracking data are available to Water Board staff. This Permit reduces the reporting to what is minimally necessary to provide meaningful data and demonstrate permit compliance.

This Permit becomes effective half way through the 2015-2016 reporting year. The reporting requirements for this Permit are slightly different than the reporting requirements for the Previous Permit. In response to the Permittees commenting on the difficulties of reporting under two different permits, this Permit, Provision C.6.e.iii.(1), continues the reporting requirements from the Previous Permit to the end of the 2015-2016 reporting year. The new reporting requirements, C.6.3.iii.(3), become effective the 2016-2017 reporting year.

Provision C.6.f. Staff Training. This section of the Permit requires Permittees to conduct annual staff trainings for municipal staff. These trainings have been found to be extremely effective means to educate inspectors and to inform them of any changes to local ordinances and state laws. Trainings provide valuable opportunity for Permittees to network and share strategies used for effective enforcement and management of erosion control practices.

C.7. Public Information and Outreach

Legal Authority

The following legal authority applies to section C.7:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC sections 13377 and 13263, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(A)(6) requires “[a] description of a program to reduce to the maximum extent practicable, pollutants in discharges from municipal separate storm sewers associated with the application of pesticides, herbicides, and fertilizer which will include, as appropriate, controls such as educational activities, permits, certifications, and other measures for commercial applicators and distributors, and controls for application in public right-of-ways and at municipal facilities.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(5) requires “a description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(6) requires “[a] description of educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials.”

Fact Sheet Finding in Support of Provision C.7.

- C.7-1** An informed and knowledgeable community is critical to the success of a stormwater program since it helps ensure greater support for the program as the public gains a greater understanding of stormwater pollution issues.
- C.7-2** An informed community also ensures greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters.
- C.7-3** The public education programs should use a mix of appropriate local strategies to address the viewpoints and concerns of a variety of audiences and communities, including minority and disadvantaged communities, as well as children.⁴⁴
- C.7-4** Target audiences should include (1) government agencies and official to achieve better communication, consistency, collaboration, and coordination at the federal, state, and local levels and (2) K-12/Youth Groups.

⁴⁴ U.S. EPA. 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

C.7-5 Citizen involvement events should make every effort to reach out and engage all economic and ethnic groups.⁴⁵

Removal of Media Relations

The Previous Permit had specific requirements for Permittees to participate in or contribute to a media relations campaign. This Permit removes these specific requirements to allow Permittees more flexibility on how to conduct public outreach on different stormwater runoff pollution messages that they feel are most urgent. It is anticipated that Permittees will continue to use public service announcements, social media, and other free media as part of the public outreach required in Provision C.7.b.

Specific Provision C.7 Requirements

Provision C.7.a. Storm Drain Inlet Marking. Storm drain inlet marking is a long-established program of outreach to the public on the nature of the storm drain system, providing the information that the storm drain system connects directly to creeks and the Bay and does not receive treatment. Past public awareness surveys have demonstrated that this BMP has achieved significant impact in raising awareness in the general public and meets the MEP standard as a required action. Therefore, it is important to set a goal of ensuring that all municipally-maintained inlets are legible labeled with a no dumping message. If storm drain marking can be conducted as a volunteer activity, it has additional public involvement value.

Provision C.7.b. Outreach Campaigns. Permittees have long been implementing outreach campaigns to educate their residents on different stormwater runoff pollution prevention messages. The Permit requires a minimum of one public outreach campaign. It is anticipated that the Bay Area Stormwater Management Agencies Association (BASMAA) will continue implementing the *Our Water, Our World* pesticide use reduction outreach campaign. It is anticipated that individual Permittees, and/or their respective countywide program, and/or BASMAA, will either continue existing public outreach campaigns or start new ones. This Permit removes specificity regarding the expected public outreach campaigns and how they must be conducted. This recognizes that the Permittees have decades of public outreach experience and allows maximum flexibility to best reach their residents regarding the impacts of stormwater pollution on receiving waters and potential solutions to mitigate the problems caused, and positively influence waste disposal practices and runoff pollution generation by encouraging the implementation of appropriate solutions. Permittees can utilize various electronic and print media, and paid and free media to best reach the different various target audiences. This Permit still requires an effectiveness assessment/evaluation after each outreach campaign. This provides the opportunity for the Permittees to evaluate whether they have best reached residents with the utilized stormwater pollution prevention messages in the outreach campaigns and how to move forward with future outreach campaigns.

Provision C.7.c. Stormwater Pollution Prevention Education. As the public becomes more aware of water quality issues and how certain behaviors negatively impact stormwater runoff, they will need more information on how to minimize stormwater

⁴⁵ U.S. EPA. 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

pollution. The Previous Permit required Permittees to have and publicize a centralized stormwater point of contact to provide the public with information on watershed characteristics and stormwater pollution prevention alternatives. The Permittees already disseminate numerous brochures, pamphlets, and fact sheets on a number of different stormwater pollution prevention messages which have a stormwater point of contact on them. Some Permittees also have these materials in other languages to reach their populations for whom English is not a first language. Many Permittees have also placed these pollution prevention materials on their websites. Since citizens increasingly use the internet to search for information, this Permit goes further to require all Permittees to place information on watershed characteristics and stormwater pollution prevention materials on their websites.

Provision C.7.d. Public Outreach and Citizen Involvement Events. This Permit combines Public Outreach and Citizen Involvement. Permittees need informed citizens to influence positive stormwater pollution behavior. Therefore, Permittees need to continue communicating with a broad spectrum of citizens with stormwater pollution prevention information through long-established outreach mechanism such as staffing tables or booths at fairs, street fairs, and other community events. Permittees shall continue utilizing appropriate outreach materials, such as printed materials, newsletter/journal articles, and videos. Permittees shall also utilize existing community outreach events, such as the Bringing Back the Natives Garden Tour. Combining Citizen Involvement Events with Public Outreach in this Permit does not minimize the importance of Citizen Involvement in events such as creek cleanups and restorations. It is important to provide opportunities for citizens to actively practice being good stewards of our environment. The combined specified numbers of events for Public Outreach and Citizen Involvement in this Permit are, for the most part, slightly less than the combined specified numbers in the Previous Permit. However, many Permittees claimed credit for both public outreach and citizen involvement for a number of events each year. In addition, this Permit has new requirements for each Permittee to have and maintain information on stormwater issues, watershed characteristics, and stormwater pollution prevention alternatives on its website and to advertise this website. It is anticipated that this website will provide the needed stormwater pollution prevention information to citizens more readily.

Provision C.7.e. Watershed Stewardship Collaborative Efforts. Watershed and Creek groups are comprised of active citizens, but they often need support from the local jurisdiction and certainly need to coordinate actions with Permittees such as flood districts and cities.

Provision C.7.f. School-Age Children Outreach. Outreach to school children has proven to be a particularly successful program with an enthusiastic audience who are efficient to reach. School children also take the message home to their parents, neighbors, and friends. In addition, they are the next generation of decision-makers and consumers.

Provision C.7.g. Outreach to Municipal Officials. It is important for Permittee staff to periodically inform Municipal Officials of the permit requirements and also future planning and resource needs driven by the permit and stormwater regulations.

C.8. Water Quality Monitoring

Legal Authority

Broad Legal Authority: CWA § 308; Federal NPDES regulations 40 CFR §§122.26(d)(2), 122.41(h), (j)-(l), 122.42(c), 122.44(i), and 122.48.

Specific Legal Authority: Permittees must conduct a comprehensive monitoring program and submit reports as required under Federal NPDES regulations cited above. CWC Section 13383 further authorizes the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements.

Fact Sheet Findings in Support of Provision C.8

C.8-1 In response to questions regarding the type of WQBELs that are most appropriate for NPDES stormwater permits, and because of the nature of stormwater discharges, U.S. EPA established the following approach to stormwater monitoring:

Each storm water permit should include a coordinated and cost-effective monitoring program to gather necessary information to determine the extent to which the permit provides for attainment of applicable water quality standards and to determine the appropriate conditions or limitations for subsequent permits. Such a monitoring program may include ambient monitoring, receiving water assessment, discharge monitoring (as needed), or a combination of monitoring procedures designed to gather necessary information.⁴⁶

According to U.S. EPA, the benefits of stormwater runoff monitoring include, but are not limited to, the following:

- Providing a means for evaluating the environmental risk of stormwater discharges by identifying types and amounts of pollutants present;
- Determining the relative potential for stormwater discharges to contribute to water quality impacts or water quality standard violations;
- Identifying potential sources of pollutants; and
- Eliminating or controlling identified sources more specifically through permit conditions.⁴⁷

C.8-2 Provision C.8 requires Permittees to conduct water quality monitoring, including ambient monitoring and monitoring of receiving waters, in accordance with 40 CFR 122.44(i) and 122.48. One purpose of water quality monitoring is to demonstrate the effectiveness of the Permittees' stormwater management actions pursuant to this Permit and, accordingly, demonstrate

⁴⁶ U.S. EPA. 1996. Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits. Sept. 1, 1996. <http://www.epa.gov/npdes/pubs/swpol.pdf>

⁴⁷ U.S. EPA. 1992. NPDES Storm Water Sampling Guidance Document. EPA/833-B-92-001.

compliance with the conditions of the Permit. Other water quality monitoring objectives under this Permit include:

- Assess the chemical, physical, and biological impacts of urban runoff on receiving waters;
- Characterize stormwater discharges;
- Assess compliance with Total Maximum Daily Loads (TMDLs) and Wasteload Allocations (WLAs) in impaired waterbodies;
- Assess progress toward reducing receiving water concentrations of impairing pollutants;
- Assess compliance with numeric and narrative water quality objectives and standards;
- Identify sources of pollutants;
- Assess stream channel function and condition, as related to urban stormwater discharges;
- Assess the overall health and evaluate long-term trends in receiving water quality; and
- Measure and improve the effectiveness of the Permittees' urban runoff control programs and the Permittees' implemented BMPs.

C.8-3 Monitoring programs are an essential element in the improvement of urban runoff management efforts. Data collected from monitoring programs can be assessed to determine the effectiveness of management programs and practices, which is vital for the success of the iterative approach, also called the "continuous improvement" approach, used to meet the Maximum Extent Practicable (MEP) standard where applicable. When water quality data indicate that water quality standards or objectives are not being met, particular pollutants, sources, and drainage areas can be identified and targeted for urban runoff management efforts. The iterative process in Provision C.1, Water Quality Standards Exceedances, could potentially be triggered by monitoring results. Ultimately, the results of the monitoring program must be used to focus actions to reduce pollutant loadings to comply with applicable WLAs, and protect and enhance the beneficial uses of the receiving waters in the Permittees' jurisdictions and the San Francisco Bay.

C.8-4 Under the CWA, NPDES permits must contain conditions that require both monitoring and reporting of monitoring results to ensure compliance. (See 33 U.S.C. § 1342(a)(2); 40 C.F.R. § 122.44(i)(1)-(2).) The regulations provide, in pertinent part:

In addition to the conditions established under §122.43(a), each NPDES permit shall include conditions meeting the following requirements when applicable.

(i) Monitoring requirements. In addition to § 122.48, the following monitoring requirements:

(1) To assure compliance with permit limitations, requirements to monitor:

(i) *The mass (or other measurement specified in the permit) for each pollutant limited in the permit;*

(ii) *The volume of effluent discharged from each outfall;*

(iii) *Other measurements as appropriate including pollutants in internal waste streams under § 122.45(i); pollutants in intake water for net limitations under § 122.45(f); frequency, rate of discharge, etc., for noncontinuous discharges under § 122.45(e); pollutants subject to notification requirements under § 122.42(a); and pollutants in sewage sludge or other monitoring as specified in 40 CFR part 503; or as determined to be necessary on a case-by-case basis pursuant to section 405(d)(4) of the CWA.*

(iv) *According to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR part 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR chapter 1, subchapter N or O. . . .*

(2) *Except as provided in paragraphs (i)(4) and (i)(5) of this section, requirements to report monitoring results shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the discharge, but in no case less than once a year. . . .*

*40 C.F.R. § 122.44(i)(1)-(2). This section allows “for monitoring other than mass or volume, namely some ‘other measurement specified in the permit [] for each pollutant limited in the permit.’” (NRDC v. U.S.EPA, No. 13-1745, 2015 WL 5780393 at *20 (2nd Cir. Oct. 5, 2015).) The regulations at 40 C.F.R. § 122.48 state that all permits specify the “[r]equired monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring.”*

Consistent with the federal regulations, water quality monitoring requirements in Provision C.8 require specific monitoring that will yield data that is both representative of the monitored activity and necessary to assure compliance with the requirements of the Permit, as described below.

C.8 requires monitoring⁴⁸:

(1) At or near outfalls during storm events to obtain flow-weighted concentrations (mass) of pollutants of concern. Flow-weighted monitoring is required to assess progress on attaining TMDLs, including assuring compliance with the required load reductions in the permit (C.8.f. Pollution of Concern Monitoring). This monitoring supports estimates of MS4 pollutant loads to receiving waters and requires data collection to support planning for control actions. The latter includes monitoring effectiveness of control measures and identifying pollutant source areas; and

⁴⁸ Provisions C.2-C.4, C.6, C.8, C.10, C.13-C.16 contain additional monitoring and reporting requirements to assure compliance with the requirements therein.

(2) *In receiving waters during wet and dry weather to assess the physical, chemical and biological impacts of MS4 discharges to urban streams (C.8.d. Creek Status Monitoring).*

Creek Status Monitoring requires receiving water monitoring of the types, frequencies and intervals sufficient to yield information on the physical, chemical and biological status of those water bodies. Receiving water monitoring is specified here in lieu of outfall monitoring for the following reasons. First, there are no end-of-pipe limits in the permit to measure. Instead, the permit requires, for example, PCB load reductions; outfall monitoring would not allow the Board to assess whether the PCB limits are met. Second, there are hundreds if not thousands of outfalls in the Permittees' jurisdictions and it is impractical to monitor every single outfall due to both cost and safety concerns. Monitoring a subset of outfalls would provide information about MS4 discharges at those specific locations at only one limited point in time, which leads to the third point that outfall monitoring is time- and spatially limited. In contrast, the required receiving water monitoring integrates the physical, biological and chemical effects to the water body of all MS4 discharges from multiple outfalls over multiple storms (i.e., time and space), yielding more useful data than outfall monitoring to determine compliance with the permit. Receiving water monitoring is done in a probabilistic or rotating basis, depending on the parameter, again yielding more useful data than fixed-location monitoring. Also, both dry weather and storm flows are addressed in receiving water monitoring, whereas outfall monitoring is normally conducted only during storm events. Dry weather discharges can constitute a significant portion of annual pollutant loadings from storm systems in urban areas (NRC 2008).

To provide an example of how receiving water monitoring better captures permit compliance, consider an illicit discharge of chloramine from a swimming pool to an MS4. Both outfall and receiving water monitoring could detect the discharge. However, outfall monitoring would need to be done at the exact location and time of an illicit discharge otherwise it would go undetected, because the discharge would have moved through the outfall and into receiving waters. In contrast, receiving water monitoring could detect chloramine for a longer period of time (depending on pH, organic carbon and temperature) from upstream outfalls to the point where dilution prevents detection. Chloramine can be fairly stable and could be detected in urban waters in summer months, when outfall monitoring is generally not conducted. Receiving water monitoring, which is required in both dry and wet weather, can and has detected chlorine (a break-down product of chloramine), leading to efforts to correct the illicit discharge problem.

Receiving water monitoring as a means to evaluate compliance with permit conditions is supported by the National Research Council (NRC). In *Urban Stormwater Management in the United States*, NRC states that the quality of stormwater from urbanized areas has been well-characterized.⁴⁹ Continuing

⁴⁹ National Research Council. 2008. *Urban Stormwater Management in the United States*.

MS4 end-of-pipe monitoring produces data of limited usefulness because of a variety of shortcomings (as detailed in the report). The NRC strongly recommends⁵⁰ that MS4 programs modify their evaluation metrics and methods to include biological and physical monitoring and an increased emphasis on watershed scale analyses to ascertain what is actually going on in receiving waters, much like what is required in the permit. Further, NRC finds that biological assessments (as required in the Permit) respond to the range of non-chemical stressors identified as being important in urban waterways including habitat degradation, hydrological alterations, and sediment and siltation impacts, as well as to the influence of nutrients and other chemical stressors where chemical criteria do not exist or where their effects are difficult to measure directly (e.g., episodic stressors).

U.S. EPA Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits notes that:

...storm water monitoring can be conducted for two basic reasons: 1) to identify if problems are present, either in the receiving water or in the discharge, and to characterize the cause(s) of such problems; and 2) to assess the effectiveness of storm water controls in reducing contaminants and making improvements in water quality.

Section C.8 of this permit satisfies these two objectives by requiring monitoring that will provide Permittees with sufficient data to pinpoint sources of pollutants and assess the effectiveness of efforts to reduce pollutants, both at the source and in receiving waters.

C.8-5 The Water Quality Monitoring Provision is intended to provide answers to fundamental management questions, outlined below. Monitoring is intended to progress as iterative steps toward ensuring that the Permittees' can fully answer, through progressive monitoring actions, management questions that include the following:

- Are conditions in receiving waters protective, or likely to be protective, of beneficial uses?
- What is the extent and magnitude of the current or potential receiving water problems?
- What is the relative urban runoff contribution to the receiving water problem(s)?
- What are the sources of urban runoff that contribute to receiving water problem(s)?
- Are conditions in receiving waters getting better or worse?

C.8-6 On April 15, 1992, the Water Board adopted Resolution No. 92-043 directing the Executive Officer to implement the Regional Monitoring Program for San Francisco Bay. Subsequent to a public hearing and various meetings, Water

⁵⁰ U.S. EPA has endorsed the NRC's recommendation. (See, e.g., EPA's District of Columbia MS4 Permit No. DC0000221 Fact Sheet, 2011.)

Board staff requested major permit holders in the Region, under authority of CWC section 13267, to report on the water quality of the Estuary. These permit holders, including the Permittees, responded to this request by participating in a collaborative effort through the San Francisco Estuary Institute. This effort has come to be known as the San Francisco Estuary Regional Monitoring Program (RMP). The RMP involves collection and analysis of data on pollutants and toxicity in water, sediment and biota of the Estuary. Because the RMP monitors waters in each Permittee's jurisdiction and gathers data on the pollutants discussed in this Permit, the Permittees are required to continue to report on the water quality of the Estuary, as presently required. Compliance with the requirement through participation in the RMP is considered to be adequate compliance.

C.8-7 The Surface Water Ambient Monitoring Program (SWAMP) is a statewide monitoring effort, administered by the State Water Board, designed to assess the conditions of surface waters throughout California. One purpose of SWAMP is to integrate existing water quality monitoring activities of the State Water Board and the Regional Water Boards, and to coordinate with other monitoring programs. Provision C.8 contains a framework, referred to as a regional monitoring collaborative, within which Permittees can elect to work cooperatively with SWAMP to maximize the value and utility of both the Permittees' and SWAMP's monitoring resources. In working cooperatively with SWAMP, Permittees can develop a monitoring program that evaluates waters in its jurisdiction and gathers data on each of the pollutants of concern discussed in this Permit.

C.8-8 In 1998, BASMAA published *Support Document for Development of the Regional Stormwater Monitoring Strategy*,⁵¹ a document describing a possible strategy for coordinating the monitoring activities of BASMAA member agencies. The document states:

BASMAA's member agencies are connected not only by geography but also by an overlapping set of environmental issues and processes and a common regulatory structure. It is only natural that the evolution of their individual stormwater management programs has led toward increasing amounts of information sharing, cooperation, and coordination.

In the Previous Permit, Permittees were given the option to implement this same concept by forming a regional monitoring collaborative, which they did. In conducting some of the monitoring required in this Provision, the Regional Monitoring Collaborative (RMC) provides efficiencies and economies of scale by performing certain tasks (e.g., planning, contracting, data quality assurance, data management and analysis, and reporting) at the regional level on behalf of

⁵¹ EcoAnalysis, Inc. & Michael Drennan Assoc., Inc., *Support Document for Development of the Regional Stormwater Monitoring Strategy*, prepared for Bay Area Stormwater Management Agencies Association, March 2, 1998.

all Permittees. Further benefits are expected as more monitoring requirements are fulfilled through the RMC.

- C.8-9** This Permit includes monitoring requirements to verify compliance with adopted TMDL WLAs and to provide data needed for TMDL development and/or implementation. This Permit incorporates the TMDLs' WLAs adopted by the Water Board as required under CWA section 303(d).
- C.8-10** SB1070 (California Legislative year 2005/2006) found that there is no single place where the public can go to get a look at the health of local water bodies. SB1070 also states that all information available to agencies shall be made readily available to the public via the Internet. This Permit requires water quality data to be submitted in a specified format and uploaded to a centralized Internet site so that the public has ready access to the data.

Specific Provision C.8 Requirements

Each of the components of the monitoring provision is necessary to meet the objectives and answer the questions listed in the findings above. Justifications for each monitoring component are discussed below.

Provision C.8.a. Compliance Options. Provision C.8.a. provides Permittees options for obtaining monitoring data through various organizational structures, including use of data obtained by other parties. This is intended to achieve the following:

- Promote cost savings through economies of scale and eliminate redundant monitoring by various entities;
- Promote consistency in monitoring methods and data quality; and
- Simplify reporting.

In this Permit, all the Stormwater Countywide Programs are encouraged to work collaboratively to conduct all or most of the required monitoring and reporting on a region-wide basis. For each monitoring component that is conducted collaboratively, one report would be prepared on behalf of all contributing Permittees; separate reports would not be required from each Program. Cost savings could result also from reduced contract and oversight hours, fewer quality assurance/quality control samples, shared sampling labor costs, and laboratory efficiencies.

Provision C.8.b. Monitoring Protocols and Data Quality. Clean Water Act regulations (40 CFR 122.41(j)(1)) require that data submitted pursuant to a NPDES permit meet certain quality standards. To achieve this, and to obtain data of known quality that can be compared to data collected in other California urban creeks, the permit requires monitoring data be collected and analyzed in accordance with the SWAMP Quality Assurance Project Plan and Standard Operating Procedures or U.S. EPA methods. The BASMAA Regional Monitoring Coalition's Creek Status Monitoring Program Quality Assurance Project Plan (January 2014) and Standard Operating Procedures (January 2014) have been deemed to be SWAMP comparable. These two BASMAA documents may be updated to reflect the changing state-of-the-science with Executive Officer's approval.

Provision C.8.c. San Francisco Estuary Receiving Water Monitoring. The San Francisco Estuary is the ultimate receiving water for most of the urban runoff in this region. For this reason and because of the high value of its beneficial uses, Provision C.8.c requires focused monitoring on the Estuary to continue. Since the mid-1990s, Permittees have caused this monitoring to be conducted by contributing financially and with technical expertise, to the RMP. Provision C.8.c requires such monitoring to continue.

Provisions C.8.d. Creek Status Monitoring. Based on the stated goals of the CWA, Creek Status Monitoring employs a three-pronged approach to monitoring water quality which includes chemical-specific monitoring, toxicity testing, and bioassessments (U.S. EPA 1991a). Each of the three elements has distinct advantages and all three work together to ensure that the physical, chemical and biological integrity of our waters are protected. Creek Status Monitoring includes probabilistic and targeted sampling of urban creeks and serves as a surrogate to monitoring the discharge from all major outfalls. Sampling the Permittees' numerous outfalls is impractical due to costs and safety factors and the resulting data would not provide commensurately better information. By sampling the sediment, biota and water column in urban creeks, the Permittees can determine where water quality problems are occurring in the creeks, then work to identify which outfalls and land uses are causing or contributing to the problem. In short, Creek Status Monitoring is needed and useful for identifying water quality problems and assessing the health of streams; it is the first step in identifying sources of pollutants and an important component in evaluating the effectiveness of an urban runoff management program. Requirements for number, frequency and general locations of samples are established to sufficiently indicate whether water quality is supportive, or likely to be supportive, of beneficial uses and whether water quality objectives are being met, at a minimum.

Provision C.8.d.i. Biological Assessment including Nutrients and General Water Quality Parameters. Biological Assessment is needed to provide site-specific information about the health and diversity of freshwater benthic communities within a specific reach of a creek, using standard procedures developed and/or used by the SWAMP. It consists of collecting samples of benthic communities and conducting a taxonomic identification to measure community abundance and diversity. Urban creek sampling can be directly compared to a non-urban or reference creek to assess benthic community health. Biological indicators, including the California Stream Condition Index (CSCI), are developed using reference streams, so the calculation of a CSCI score at an urban site already takes comparison to reference conditions into account. This monitoring can also provide information on cumulative pollutant exposure/impacts because pollutant impacts to the benthic community accumulate and occur over time. Nutrient monitoring is necessary because recent monitoring data indicate nutrients, which can increase algal growth and decrease dissolved oxygen concentrations, are present in significant concentrations in Bay Area creeks. The sampling timeframe (generally between April 15 and June 30) is when invertebrates are developed enough to be captured in the sampling equipment but not developed enough to have emerged (flown off), and thus is the timeframe in which necessary information concerning biological integrity can be obtained.

Provision C.8.d.ii. Chlorine monitoring is needed to detect a release of potable water or other chlorinated water sources, which are toxic to aquatic life.

Provision C.8.d.iii. Temperature monitoring is needed to determine if conditions in creeks to which urban runoff is discharged are supportive of cold-water and warm-water beneficial uses, as appropriate.

Provision C.8.d.iv. Continuous monitoring of dissolved oxygen, temperature, and pH is required because these parameters are fundamental to supporting aquatic life beneficial uses and they impact the effect of pollutants in freshwater (e.g., ammonia toxicity is dependent on pH and temperature).

Provision C.8.d.v. Pathogen Indicator monitoring is needed to detect pathogens in waterbodies that could be sources of impairment to recreational uses at or near the sampling location.

Provision C.8.d. (All Parameters) Monitoring Frequency, Duration, and Location. Creek Status Monitoring continues to be an annual requirement for the Permittees, except for two much smaller Permittees, Fairfield-Suisun and Vallejo. For each of the Creek Status Monitoring parameters, the number or frequency of samples required is based on the relative population within the countywide stormwater program. Costs are minimized while data necessary for successful stormwater management are obtained. Monitoring durations are based on the amount of data needed to understand the potential effects related to each Creek Status Monitoring parameter. Monitoring frequencies and durations are specified for each parameter.

Creek Status Monitoring locations are to be selected on a probabilistic (random) or targeted basis, depending on the parameter, in similar fashion to SWAMP. If correctly sited, sampling stations are expected to be very useful in answering the monitoring program's management questions and meeting its goals. For this reason, Provision C.8.d. requires sample locations to be based on surrounding land use, likelihood of urban runoff impacts, existing data gaps, and similar considerations. This will help maximize the utility of the sample locations, while also providing the Permittees with adequate flexibility to ultimately choose practical Creek Status Monitoring locations.

Provision C.8.e. Stressor/Source Identification (SSID) Projects are necessary to identify sources of pollutants; identify new or emerging pollutants; and improve stormwater management actions. When Creek Status Monitoring results indicate an exceedance of a water quality objective, a temperature or toxic effect threshold, or other "trigger," these results become candidates for SSID projects. The trigger provides a threshold for considering follow up, and Permittees select which results will be followed up on via a SSID project based on criteria such as magnitude of threshold exceedance; parameter (for a variety of parameters); and likelihood stormwater management action(s) could address the exceedance. A minimum number of SSID Projects is required, rather than a SSID for every monitoring result that exceeds a "trigger" threshold. Every trigger exceedance need not result in a SSID project because (1) triggers are not water quality objectives in most cases and (2) this approach requires investigation of potential water quality issues without duplicating efforts.

Through SSID projects, Permittees must identify the source of the problem and take steps to reduce any pollutants discharged from or through their municipal storm sewer systems. This requirement conforms to the process, outlined in Provision C.1., of complying with the Discharge Prohibition and Receiving Water Limitations. The timeframes for initiating and completing follow-up actions acknowledge the realities of budgeting for these studies, some, but not all of which could require funding above the level available in a given fiscal year. If multiple “triggers” are identified through monitoring, Permittees must focus on the highest priority problems; a cap on the total number of source identification projects conducted within the Permit term is provided to cap Permittees’ potential costs.

C.8.f. Pollutants of Concern⁵² Monitoring. CWA section 303(d) TMDL requirements, as implemented under the CWC, require a monitoring plan designed to measure the effectiveness of the TMDL point and nonpoint source control measures and the progress the water body is making toward attaining water quality objectives. Such a plan necessarily includes collection of water quality data. Provision C.8.f. Pollutants of Concern (POC) monitoring is intended to assess inputs of Pollutants of Concern to the Bay from local tributaries and urban runoff; provide information to support implementation of TMDLs and other pollutant control strategies; assess progress toward achieving wasteload allocations (WLAs) for TMDLs; and help resolve uncertainties in loading estimates and impairments associated with these pollutants.

In particular, POC monitoring addresses five priority POC management information needs:

- 1) Source Identification - identifying which sources or watershed source areas provide the greatest opportunities for reductions of POCs in urban stormwater runoff;
- 2) Contributions to Bay Impairment - identifying which watershed source areas contribute most to the impairment of San Francisco Bay beneficial uses (due to source intensity and sensitivity of discharge location);
- 3) Management Action Effectiveness - providing support for planning future management actions or evaluating the effectiveness or impacts of existing management actions;
- 4) Loads and Status - providing information on POC loads, concentrations, and presence in local tributaries or urban stormwater discharges; and
- 5) Trends - evaluating trends in POC loading to the Bay and POC concentrations in urban stormwater discharges or local tributaries over time.

The Permit specifies monitoring methods that can be used to address these information needs and which information needs apply to each pollutant of concern. The Permit provides flexibility in the number of samples, or level of effort, but requires minimums to be met annually and over the Permit term. The level of effort (expressed as required number of samples collected and analyzed) is similar to the level of sampling and analysis effort for pollutants of concern monitoring required in the Previous Permit term.

⁵² See sections C.9, C.11, C.12, and C.13 of this Fact Sheet for more information on Pollutants of Concern.

The approach for POC monitoring does not specify specific monitoring locations or monitoring frequencies at those specific locations. Rather, the Permit requires that monitoring be intelligently and flexibly directed toward answering the management information needs (that apply to a given pollutant), and this flexibility allows the monitoring strategy to be adapted and improved based on information obtained from monitoring conducted early in the permit term. The flexibility also allows the Permittees to continue collecting useful information even during drought years in which conditions limit some types of data collection (e.g., storm even sampling) but not others (e.g., collection of bed sediment). As is true of Creek Status Monitoring, it is impractical to sample all of the urban runoff outfalls in the region, and these outfall data (obtained at great expense) would not provide commensurately better information relative to the management information needs for pollutants of concern. By strategically sampling the sediment and water column in urban creeks and conveyances, the Permittees can better address the five information needs stated above.

To some extent, POC monitoring builds on what we already know about pollutants in creeks (also referred to as tributaries to the Bay) and leads to more effective actions to control those pollutants. For example, we know that pesticide-related toxicity has been widespread and results from approved pesticide uses. POC monitoring for toxicity therefore is tailored to provide information on which pesticides are currently a concern to water quality; a limited number of toxicity samples provides adequate information. Other requirements for number, frequency and general locations of samples are similarly tailored to information needs.

Provisions C.8.g. Pesticides and Toxicity Monitoring. Toxicity testing provides a tool for assessing toxic effects (acute and chronic) of all the chemicals in samples of stormwater, receiving waters or sediments and allows the cumulative effect of the pollutants present in the sample to be evaluated, rather than the toxic responses to individual chemicals. Toxicity in water and on sediment also are monitored in order to determine whether the numeric targets of the Diazinon and Pesticide-Related Toxicity in Urban Creeks TMDL are being achieved, and to help provide evidence on whether pesticide-related toxicity is decreasing in urban creek waters.

This subprovision combines all the pesticide and toxicity into one place, where previous permits had pesticide and toxicity monitoring in both Creek Status and Pollutants of Concern Monitoring subprovisions. This format is intended to provide for more thoughtful dry weather and wet weather sampling designs that may provide more meaningful data for the region and potentially for statewide studies. Since the Urban Creeks TMDL was adopted by the Water Board in 2005, it has become more apparent that pesticide related toxicity water quality problems are similar in urban waterways across the State. At this time, efforts have begun to develop a statewide coordinated pesticides and pesticide-related toxicity monitoring program. In addition, pesticide-related water quality issues are subject to change as different pesticide products gain market share and increase in urban usage. For these reasons, Permittees may request the Executive Officer modify, reduce or eliminate the requirements of this subprovision during the permit term, provided the resultant change, viewed in context of the statewide program, would result in overall improvement of pesticide monitoring data collection.

This Permit describes type, interval and frequency of pesticides and toxicity monitoring sufficient to yield data which are representative of both dry weather and wet weather urban runoff. Required analytes include toxicity and pesticides that are being found at or near concentrations that cause chronic or acute effects to aquatic organisms. Required test methods include the relatively recent Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136) for chronic toxicity. The test species are selected as the most sensitive species to pollutants currently known or suspected to be present in stormwater discharges. All required methods and test species are consistent with those used by SWAMP as well as those required in other California MS4 permits, including the statewide Caltrans permit.

The non-pesticide pollutants arsenic, cadmium, chromium, copper, lead, nickel, and zinc are included in this subprovision in order to facilitate the synoptic collection of these pollutants in sediment with toxicity in sediment during the dry season.

C.8.h. Reporting. CWC section 13383 provides authority for the Water Board to require technical water quality reports. Provision C.8.h. requires Permittees to submit electronic and comprehensive reports on their water quality monitoring activities to (1) determine compliance with monitoring requirements; (2) provide information useful in evaluating compliance with all Permit requirements; (3) enhance public awareness of the water quality in local streams and the Bay; and (4) standardize reporting to better facilitate analyses of the data, including for the CWA section 303(d) listing process.

C.9. – C.14. Pollutants of Concern including Total Maximum Daily Loads

Provisions C.9 through C.14 pertain to pollutants of concern, including those for which TMDLs have been adopted.

Legal Authority

The following legal authority applies to provisions C.9 through C.14:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC sections 13377 and 13383, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: The TMDL-based requirements for pesticides, mercury, PCBs, and bacteria have been imposed in accordance with 40 Code of Federal Regulations section 122.44(d)(1)(vii)(B). Pursuant to 40 Code of Federal Regulations section 122.44(d)(1)(vii)(B), the effluent limitations for NPDES permits must be consistent with the assumptions and requirements of any available Waste Load Allocation (WLA) for the discharge prepared by the state and approved by U.S. EPA, or established by U.S. EPA. In addition, Water Code section 13263, subdivision (a), requires that waste discharge requirements implement any relevant water quality control plans (basin plans), including TMDL requirements that have been incorporated into the basin plans. In addition, under CWA section 402(p)(3)(B)(iii), MS4 discharges “shall require controls to reduce the discharge of pollutants to the maximum extent practicable . . . and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.” (33 U.S.C. § 1342(p)(3)(B)(iii).) Under this provision, the Water Board may include requirements for reducing pollutants in stormwater discharges as necessary for compliance with water quality standards. (*See Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1166.) This includes requirements to meet TMDLs since TMDL targets are an interpretation of water quality standards.

The Water Board may impose WQBELs effluent limitations that are BMPs or numeric effluent limitations. (33 U.S.C. §1342(p)(3)(B)(iii); 40 C.F.R. §122.44(k)(2)&(3) and § 122.44(d)(1)(vii)(B).) This is consistent with U.S. EPA’s November 26, 2014, “Revision to the November 22, 2002, Memorandum ‘Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs’” (2014 U.S. EPA Memo.) This memorandum, while not binding authority, states “[w]here the TMDL includes WLAs for stormwater sources that provide numeric pollutant loads, the WLA should, where feasible, be translated into effective, measurable WQBELs that will achieve this objective. This could take the form of a numeric limit, or of a measurable, objective BMP-based limit that is projected to achieve the WLA.” The 2014 U.S. EPA Memo further acknowledges that the permitting authority should consider the schedules in the TMDL as it decides whether and how to establish enforceable interim requirement and interim dates in the Permit. The interim deadlines in the Provisions are consistent with and in furtherance of the deadlines in the TMDLs.

For trash, the Water Board is authorized to impose effluent limitations under 40 CFR 122.44(d)(1)(i), which requires NPDES permits to include limitations to “control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.” Trash is being discharged at levels that cause an excursion above the water quality objectives for floating, settleable and suspended materials. For copper, the Permit requires best management practices and copper control measures to prevent urban runoff discharges from causing or contributing to exceedances of copper site-specific water quality objectives for the Bay, consistent with the Basin Plan. Water Code section 13263 requires that waste discharge requirements implement the Basin Plan.

Basin Plan Requirements: Section 4.8 of the Region’s Water Quality Control Plan (Basin Plan) states that NPDES stormwater permits issued to municipalities will include requirements to prevent or reduce discharges of pollutants that cause or contribute to violations of water quality objectives. The Water Board has been taking a phased approach of first requiring technically and economically feasible controls to reduce pollutant discharges to the maximum extent practicable. Where this does not result in attainment of water quality objectives, the Basin Plan states the Water Board will require implementation of additional control measures to meet water quality objectives. The Basin Plan also contains urban stormwater TMDL implementation requirements at sections 7.1.1, 7.2.2, 7.7.1, 7.2.3, and 7.4.1 for pesticide-related toxicity, mercury, PCBs, and bacteria. The Basin Plan also requires urban stormwater requirements for copper in section 7.2.1. Finally, the Basin Plan Table 4-1 includes Prohibition 7, which prohibits the discharge of “rubbish, refuse, bark, sawdust, or other solid wastes into surface waters or at any place where they would contact or where they would be eventually transported to surface waters, including flood plain areas.”

General Strategy for Sediment-Bound Pollutants (Mercury and PCBs)

The control measures for mercury are intended to implement the urban runoff requirements stemming from TMDLs for these pollutants. The control measures required for PCBs are intended to implement those that are consistent with control measures in the PCBs TMDL implementation plan. The urban runoff management requirements in the PCBs TMDL implementation plan call for permit-term requirements based on an implementation of controls to reduce PCBs, and that is the intended approach of the required provisions for all pollutants of concern. Many of the control actions addressing PCBs and mercury will result in reductions of a host of sediment-bound pollutants, including legacy pesticides, PBDEs, and others. The strategy for these pollutants is to use PCBs control to guide decisions concerning where to focus effort, but implementation of the control efforts would take into account the benefits for controlling other pollutants of concern. The POC strategy also includes a phased approach that provides for pilot scale testing (in the 2009 issuance of this permit) and for identifying areas with POC sources. The overall strategy for addressing sediment bound POCs includes the following modes:

1. Pilot-testing in a few specific locations.

2. Focused implementation in areas where benefits are most likely to accrue.
3. Full-scale implementation throughout the region.
4. Other: This may refer to experimental control measures, Research and Development, desktop analysis, laboratory studies, and/or literature review.

The logic of such categorization is that, as actions are tested and confidence is gained regarding the control measure's effectiveness, the control measure may be implemented with a greater scope. For example, an untested control measure for which the effectiveness is uncertain may be implemented as a pilot project in a few locations during a permit term. If benefits result, and the action is deemed effective, it will be implemented in subsequent permit terms in a focused fashion in more locations or perhaps fully implemented throughout the Region, depending upon the nature of the measure. Conversely, the benefits of other control measures may be well known, and these control measures should be implemented in all applicable locations and/or situations. By conducting actions in this way and gathering additional information about effectiveness and cost, we will advance our understanding and be able to perform an updated assessment of the suite of actions.

During the Previous Permit term, a large part of the effort was focused on gathering necessary information about control measure effectiveness. In effect, most of the control measures were implemented at the pilot scale. In this Permit term, the emphasis will shift toward focused and perhaps full-scale implementation of the most effective control measures, and progress will be measured through accounting for specific load reductions. In subsequent permit terms control measures will be implemented on the basis of what we learn in this term, and we will, thus, achieve iterative refinement and improvement through time.

Background on Specific Provisions: Pursuant to CWA§ 402(p)(3)(B)(ii)-(iii) and 40 CFR § 122.44(d)(1)(vii)(B) , Provisions C.9 through C.14 contain technology-based requirements to control pollutants to the MEP, such other provisions the Water Board has determined appropriate for the control of pollutants under CWA, water quality-based requirements consistent with the assumptions and requirements of any WLAs in the applicable TMDLs, and requirements to effectively prohibit non-stormwater discharges into storm sewers. Provision C.9 contains requirements to implement the TMDL for pesticide-related toxicity in urban creeks. Provision C.10 contains requirements to implement narrative water quality objectives related to trash in all receiving water. Provision C.11 contains requirements to implement the San Francisco Bay mercury TMDL WLAs and the TMDL WLAs for mercury in the Guadalupe River Watershed. Provision C.12 contains requirements to implement the San Francisco Bay PCBs TMDL WLAs. Provision C.13 contains requirements to implement the copper site-specific objectives for San Francisco Bay. Provision C.14 contains requirements to implement the TMDL WLAs for San Pedro Creek and Pacifica State Beach Bacteria.

C.9. Pesticides Toxicity Control

Fact Sheet Findings in Support of Provision C.9

- C.9-1** This Permit implements the Basin Plan amendments adopted by the Water Board that establish a Water Quality Containment Strategy and TMDL for diazinon and pesticide-related toxicity for Bay Area urban creeks on November 16, 2005, and approved by the State Water Board on November 15, 2006. The Water Quality Containment Strategy requires urban runoff management agencies to minimize their own pesticide use, conduct outreach to others, lead monitoring efforts, and take actions related to pesticide regulatory programs. Control measures implemented by urban runoff management agencies and other entities (except construction and industrial sites) shall reduce pesticides in urban runoff.
- C.9-2** The TMDL is allocated to all urban runoff, including urban runoff associated with MS4s, Caltrans facilities, and industrial, construction, and institutional sites. The allocations are expressed in terms of toxic units and diazinon concentrations.
- C.9-3** This provision is consistent with 2014 U.S. EPA Memo⁵³ providing guidance on implementing TMDL WLAs in NPDES storm water permits. Specifically, this provision establishes clear actions to achieve pesticide load reductions as well as other requirements (see C.9.f) necessary to achieve receiving water limits. The timeline for achieving the TMDL is not a fixed date for the following reasons. Pesticide-related toxicity continues to occur because state and federal pesticide regulatory programs, as currently implemented, allow pesticides to be used in ways that cause or contribute to aquatic toxicity. The TMDL implementation plan recognizes that (1) Permittees must control their own use of pesticides, but Permittees are not solely responsible for attaining the allocations, because their authority to regulate others' pesticide use is constrained by federal and state law; and (2) because a realistic date for achieving allocations cannot be discerned given the current pesticide regulatory framework, reviewing the implementation strategy every five years, at permit reissuance, is the appropriate timeline.

Specific Provision C.9 Requirements

C.9 provisions implement the TMDL for Urban Creeks Pesticide Toxicity. All C.9 provisions are stated explicitly in the implementation plan for this TMDL. Permittees are encouraged to coordinate activities with the Urban Pesticide Committee and other agencies and organizations. The Urban Pesticides Committee has served as an information clearinghouse and as a forum for coordinating pesticide TMDL implementation. The list of urban-use pesticides of concern to water quality includes

⁵³ U.S. EPA. November 26, 2014. Revisions to the November 22, 2002 Memorandum "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs"

pesticides for which local area monitoring data exceed or approach benchmarks and pesticides currently linked to toxicity in surface waters.

Provisions C.9.a through C.9.d are designed to insure that integrated pest management (IPM) is adopted and implemented as policy by all municipalities. IPM is a pest control strategy that uses an array of complementary methods: natural predators and parasites, pest-resistant varieties, cultural practices, biological controls, various physical techniques, and pesticides as a last resort. If implemented properly, it is an approach that can significantly reduce or eliminate the use of pesticides. The implementation of IPM will be assured through training of municipal employees and contractor requirements.

Provision C.9.e directs the municipalities to conduct outreach to consumers at point of purchase, to residents who contract for pest control, and to pest control professionals. Such targeted outreach is often intended to make the public and pest control professionals aware of the water quality impacts of current-use pesticides that are impacting or have potential to negatively impact urban creeks.

Provision C.9.f requires that municipalities (through cooperation or participation with BASMAA and CASQA) track and participate in pesticide regulatory processes like the U.S. EPA pesticide evaluation and registration activities related to surface water quality, and the California Department of Pesticide Regulation pesticide evaluation activities. The goal of these efforts is to provide pertinent water quality data and encourage both the state and federal pesticide regulatory agencies to fully evaluate aquatic impacts and to mitigate for impacts to urban water bodies within the pesticide regulation or registration process. Accomplishing this goal would represent the most efficient and effective means to prevent pesticide-related water quality problems in the future.

Provision C.9.g requires Permittees to evaluate the effectiveness of their pesticide source control actions and is critical to the success of municipal efforts to control pesticide-related toxicity. Future permits must be based on an updated assessment of what is working and what is not. With every provision comes the responsibility to assess its effectiveness and report on these findings through the Permit. The particulars of assessment will depend on the nature of the control measure.

C.10. Trash Load Reduction

Legal Authority

The following legal authority applies to section C.10:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC sections 13383, 13377 and 13263, and Federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, D, E, and F), 40 CFR 122.26(d)(2)(iv) , and 40 CFR § 122.44(d)(1)(i).

Specific Legal Authority: Federal NPDES regulations 40 CFR 122.26(d)(2)(i) requires “a demonstration that the [Permittee] can operate pursuant to legal authority established by statute, ordinance or series of contracts which authorizes or enables the [Permittee] at a minimum to . . . (B) Prohibit through ordinance, order or similar means, illicit discharges to the municipal separate storm sewer; (C) Control through ordinance, order or similar means the discharge to a municipal separate storm sewer of spills, dumping or disposal of materials other than storm water”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(A)(1) requires “a description of maintenance activities and a maintenance schedule for structural controls to reduce pollutants (including floatables) in discharges from municipal separate storm sewers.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B) requires “shall be based on a description of a program, including a schedule, to detect and remove (or require the discharger to the municipal storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(2) requires “a description of procedures to conduct on-going field screening activities during the life of the permit, including areas or locations that will be evaluated by such field screens.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(3) requires “a description of procedures to be followed to investigate portions of the separate storm sewer system that, based on the results of the field screen, or other appropriate information, indicate a reasonable potential of containing illicit discharges or other sources of non-storm water.”

Federal NPDES regulations 40 CFR 122.26(d)(2)(iv)(B)(4) requires “a description of procedures to prevent, contain, and respond to spills that may discharge into the municipal separate storm sewer.”

Federal NPDES regulations 40 CFR § 122.44(d)(1)(i) requires limitations for pollutants which are or may be discharged at a level which has the reasonable potential to cause or contribute to an excursion above any water quality standard, including any narrative criteria for water quality.

San Francisco Bay Basin Plan contains these narrative water quality objectives applicable to trash: floating material (waters shall not contain floating material,

including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses); settleable material (waters shall not contain substances in concentrations that result in the deposition of material that cause nuisance or adversely affect beneficial uses); and suspended material (waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses). Trash is being discharged at levels that have the reasonable potential to cause or contribute to excursions of these narrative water quality objectives. There are currently 26 waterbodies in the Region impaired by trash on the Clean Water Act section 303(d) list and most are receiving waters of discharges from Permittees' municipal storm drain systems. In additional, all Permittees have identified trash hot spots in their receiving water in a July 2010 submittal required by the previous permit. NPDES permitting authorities have discretion to include requirements for reducing pollutants in storm water as necessary for compliance with water quality standards. (*Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159, 1166.) U.S. EPA recommends that for MS4 discharges with reasonable potential to cause or contribute to a water quality excursion, a permitting authority exercises its discretion to include clear, specific, and measurable requirements and, where feasible, numeric effluent limitations as necessary to meet water quality standards.⁵⁴ The permit contains such requirements to meet water quality standards.

The Basin Plan also contains includes Chapter 4 – Implementation, Table 4-1 Prohibitions, Prohibition 7, which prohibits the discharge of rubbish, refuse, bark, sawdust, or other solid wastes into surface waters or at any place where they would contact or where they would be eventually transported to surface waters, including flood plain areas. This prohibition was adopted by the Water Board in the 1975 Basin Plan, primarily to protect recreational uses such as boating.

In addition to the foregoing, it should be noted that the State Water Board on April 7, 2015, adopted amendments to the Ocean Plan and the Inland Surface Waters and Inland Bays and Estuaries Plans that establish a narrative water quality objective for trash; establish a prohibition on the discharge of trash; provide implementation requirements for permitted storm water and other dischargers; set a time schedule for compliance, and provide a framework for monitoring and reporting requirements (collectively, Trash Amendments). These Trash Amendments are subject to review by the Office of Administrative Law and U.S. EPA and are not yet effective. Nonetheless, the C.10 requirements of this Permit are consistent with the Trash Amendments.

⁵⁴ U.S. EPA, November 26, 2014, "Revisions to the November 22, 2002 Memorandum 'Establishing Total Maximum Daily Load Waste Allocations for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs.'"

Fact Sheet Findings in Support of Provision C.10

C.10-1 Trash is a pervasive problem near and in creeks and in San Francisco Bay. Controlling trash continues to be one of the priorities for this Permit reissuance, not only because of the trash discharge prohibition, but also because trash causes major impacts on our enjoyment of creeks and the Bay. There are also significant impacts on aquatic life and habitat in those waters, and eventually to the global ocean ecosystem, where plastic often floats; persists in the environment for hundreds of years - if not forever; concentrates organic toxins; and is ingested by aquatic life. There are also physical impacts, as aquatic species can become entangled and ensnared, and can ingest plastic that looks like prey, losing the ability to feed properly.

For the purposes of this provision, trash is defined to consist of litter and particles of litter. Manmade litter is defined in California Government Code section 68055.1 (g): *Litter* means all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials, thrown or deposited on the lands and waters of the state, but not including the properly discarded waste of the primary processing of agriculture, mining, logging, sawmilling, or manufacturing.

C.10-2 Data collected by Water Board staff using the SWAMP Rapid Trash Assessment (RTA) Protocol,⁵⁵ over the 2003–2005 timeframe,⁵⁶ suggested that the approach to managing trash in waterbodies was not reducing the adverse impact on beneficial uses. The levels of trash in the waters of the San Francisco Bay Region were and are alarmingly high, considering the Basin Plan prohibits discharge of trash and that littering is illegal with potentially large fines. Even during dry weather conditions, a significant quantity of trash, particularly plastic, is making its way into waters and being transported downstream to San Francisco Bay and the Pacific Ocean. On the basis of 85 surveys conducted at 26 sites throughout the Bay Area, staff has found an average of 2.93 pieces of trash for every foot of stream. All the trash was removed when it was surveyed, indicating high return rates of trash over the 2003–2005 study period. There did not appear to be one county within the Region with significantly higher trash in waters relative to other counties—the highest wet weather deposition rates were found in western Contra Costa County, and the highest dry weather deposition was found in Sonoma County. Results of the trash in waterbodies assessment work by staff show that rather than adjacent neighborhoods polluting the sites at the bottom of the watershed, these areas, which tend to have lower property values, are subject to trash washing off with urban stormwater runoff cumulatively from the entire watershed.

C.10-3 A number of key conclusions can be made on the basis of the trash measurement in streams:

⁵⁵ SWAMP Rapid Trash Assessment Protocol, Version 8

⁵⁶ SWAMP S.F. Bay Region Trash Report, January 23, 2007

- Lower watershed sites have higher densities of trash.
- All watersheds studied in the San Francisco Bay Region have high levels of trash.
- There are trash source hotspots (usually associated with parks, schools, or poorly-kept commercial facilities located near creek channels) that appear to contribute a significant portion of the trash deposition at lower watershed sites.
- Homeless encampments and creekside litter from a variety of sources is a significant source of trash directly dumped and placed in the riparian zone where it can be swept into receiving waters by storm flows.
- Dry season deposition of trash, associated with wind and dry season runoff, contributes measurable levels of trash to downstream locations.
- The majority of trash is plastic at lower watershed sites where trash accumulates in the wet season. This suggests that urban runoff is a major source of floatable plastic found in the ocean and on beaches as marine debris. While much of the initial trash deposited and washed into receiving waters is paper, the plastic trash, both floatable and non-floatable is the most persistent trash that survives, significantly impacting the Bay and Ocean.
- Parks that have more evident management of trash by city staff and local volunteers, including cleanup within the creek channel, have measurably less trash pieces and higher RTA scores.

C.10-4 The ubiquitous, unacceptable levels of trash in waters of the San Francisco Bay Region warrant a comprehensive and progressive program of education, warning, and enforcement, and certain areas warrant consideration of structural controls and treatment.

C.10-5 Trash in urban waterways of coastal areas can become marine debris, known to harm fish and wildlife and cause adverse economic impacts.⁵⁷ Trash is a regulated water pollutant that has many characteristics of concern to water quality. It accumulates in streams, rivers, bays, and ocean beaches throughout the San Francisco Bay Region, particularly in urban areas.

C.10-6 Trash adversely affects numerous beneficial uses of waters, particularly recreation and aquatic habitat. Not all trash and debris delivered to streams are of equal concern with regards to water quality. Besides the obvious negative aesthetic effects, most of the harm of trash in surface waters is imparted to wildlife in the form of entanglement or ingestion.^{58,59} Some elements of trash exhibit significant threats to human health, such as discarded medical waste,

⁵⁷ Moore, S.L., and M.J. Allen. 2000. Distribution of anthropogenic and natural debris on the mainland shelf of the Southern California Bight. *Mar. Poll. Bull.* 40:83-88.

⁵⁸ Laist, D. W. and M. Liffmann. 2000. *Impacts of marine debris: research and management needs*. Issue papers of the International Marine Debris Conference, Aug. 6-11, 2000. Honolulu, HI, pp. 16–29.

⁵⁹ McCauley, S.J. and K.A. Bjorndahl. 1998. Conservation implications of dietary dilution from debris ingestion: sublethal effects in post-hatchling loggerhead sea turtles. *Conserv. Biol.* 13(4):925-929.

human or pet waste, and broken glass.⁶⁰ Also, some household and industrial wastes can contain toxic batteries, pesticide containers, and fluorescent light bulbs that contain mercury. Large trash items, such as discarded appliances, can present physical barriers to natural stream flow, causing physical impacts such as bank erosion. From a management perspective, the persistent accumulation of trash in a waterbody is of particular concern, and signifies a priority for prevention of trash discharges. Also of concern are trash hotspots where illegal dumping, littering, and/or accumulation of trash occur.

C.10-7 The Water Board, at its February 11, 2009, hearing, adopted a resolution proposing that 26 waterbodies in the region be added to the 303(d) list for the pollutant trash. The adopted Resolution and supporting documents are contained in Attachment 10.1 – 303(d) Trash Resolution and Staff Report Feb 2009.

C.10-8 The trash control strategies, monitoring requirements, and mandatory deadlines for trash reductions meet the “Maximum Extent Practicable” (MEP) standard contemplated by the CWA and include such other provisions as the Board determines appropriate for control to ultimately meet the narrative water quality objectives for floating material, settleable material, and suspended material. (CWA §402(p)(3)(B)(iii)) This Permit builds on the data and information collected in the last permit term and increases expectations of Permittees in this Permit. In particular, this Permit requires that the Permittees make significant progress toward having no trash impact on receiving waters by implementing a combination of increased full trash capture, and trash reduction and elimination measures that have similar effect to full trash capture. This is consistent with the statewide amendment to the Ocean Plan and the Inland Surface Waters, Bays and Estuaries Plan relating to trash controls. This Permit includes trash generation source identification and control, visual assessment data collection, and development of receiving water monitoring protocols. These requirements reflect the most current knowledge and data available concerning effectiveness of trash control strategies such as full trash capture, enhanced maintenance methods and current thinking regarding the best methods to assess trash reduction outcomes for the various trash reduction methods.

Specific Provision C.10 Requirements

C.10.a. Trash Reduction Requirements

C.10.a.i. Trash Reduction Schedule – This provision includes compliance deadlines of 70 percent trash load reduction by 2017 and 80 percent trash load reduction by 2019. To provide assurance that Permittees are making timely progress towards meeting the 2017 deadlines, this provision includes a performance guideline of 60 percent trash load reduction by 2016.. This performance guideline is a reporting requirement, but not an enforceable end point. It is a benchmark for assessing progress, and Permittees that do not attain the 60 percent performance guideline are

⁶⁰ Sheavly, S.B. 2004. *Marine Debris: an Overview of a Critical Issue for our Oceans*. 2004 International Coastal Cleanup Conference, San Juan, Puerto Rico. The Ocean Conservancy.

required to provide documentation in a report to the Water Board that adequate trash management actions to attain the forthcoming 2017 mandatory deadline is underway or scheduled. The compliance deadlines are consistent with the previous permits goals of 70 percent trash load reduction by 2017 and 100 percent trash load reduction (or no adverse trash impact) by 2022.

C.10.a.ii. Trash Generation Area Management – The overarching strategy for reducing trash involves mapping trash generation areas within a Permittee’s jurisdiction, then applying effective trash reduction actions to the areas of trash generation and assessing the effectiveness of those actions in delineated trash generation areas, until trash generation is reduced to the no impact level over a Permittee’s entire jurisdiction. The Permittees reported these trash generation maps with their Long Term Trash Reduction Plans February, 2014, and these maps provide the 2009 trash generation levels, which were required by the previous permit. Permittees that find inaccuracies in their submitted maps may submit corrected 2009 trash generation maps with their 2016 Annual Reports. Permittees developed their 2009 generation maps by dividing their jurisdiction into Very High, High, Moderate, and Low trash generation areas based on the following ranges of trash generation rates:

Low = less than 5 gal/acre/yr;
Moderate = 5-10 gal/acre/yr;
High = 10-50 gal/acre/yr; and
Very High = greater than 50 gal/acre/yr.

C.10.a.ii.a. Actual trash loading values, particularly in areas of high and very high trash generation areas, may vary significantly, but these delineated ranges provide a frame of reference for tracking and demonstrating trash load reductions and provide relative trash generation weight of these four categories. Permittees likely will need to reduce trash generation to at least Low to attain the ultimate required water quality-based outcome of no trash loads that cause or contribute to adverse trash impacts in receiving waters, i.e., the 2022 goal. Whether attainment of Low trash generation rates are sufficient will be evaluated and considered in the development of requirements in the next permit. Demonstration that trash management actions reduce trash generation from Very High, High, or Moderate to a Low trash generation rate during this permit term provides a practicable means of demonstrating trash load reduction and attainment of the 2017 and 2019, 70 and 80 percent trash load reduction requirements, respectively, and consideration of the 2016 performance guideline.

C.10.a.ii.b. Permittees are responsible for trash discharges from their storm drain systems. Permittees have direct control over their properties and right of way, but must also exert control over other lands, such as commercial parking lots, that are plumbed directly into their storm drain system, since trash washed into such conveyance by stormwater will then directly impact receiving waters without encountering trash control actions on public right of way. Permittees may use a variety of means to ensure that either full trash capture devices are installed on such conveyances prior to intersection with the public storm drain system or that other

control actions equivalent to full trash capture are implemented on those private lands and such actions are verified through assessment, similar to the on-land visual assessment. Permittees must report the status of all such lands in parcel sizes over 10,000 ft² and place them on their trash generation maps or otherwise record location and status information about them. While Permittees are responsible for all such land in their jurisdictions, the Permit sets a reporting threshold of 10,000 ft² with the goal of balancing appropriate oversight over those lands and limiting the total number of specific parcels or area that must be identified and mapped.

C.10.a.iii. Minimum Full Trash Capture - This provision requirement is carried forward from the previous permit. Full trash capture systems provide a direct and effective mean to control trash discharges to and from storm drain systems. Commercial retail/wholesale land use area is a simple surrogate of trash generation area, and the minimum amount of area that was required to be treated with full trash capture systems was considered reasonable and achievable. Most, if not all, Permittees have already met or exceeded the minimum full trash capture requirement. Full trash capture system screening and treatment flow capacity specifications are the same as those specified in the previous permit. They are also the same as the full trash capture specifications in the Trash Amendments adopted by the State Water Board.

C.10.b Demonstration of Trash Reduction Outcomes

C.10.b.i.(a.-c.) Full Trash Capture Systems - Full trash capture systems must be maintained to be effective. If a full trash capture systems enters a rain period with a full trash reservoir, or is clogged with leaves or trash, trash may bypass the device and it will not function as a full trash capture device. Therefore these devices must be frequently inspected and maintained at a sufficient level. These requirements allow for Permittees to conduct inspections and maintenance in a flexible, as-needed, manner. Permittees are required to maintain adequate maintenance records and report any full trash capture devices found to be not adequately maintained or improperly functioning. Permittees are also required to certify annually that all of their full trash capture devices are adequately operated and maintained.

C.10.b.ii. Other Trash Management Actions

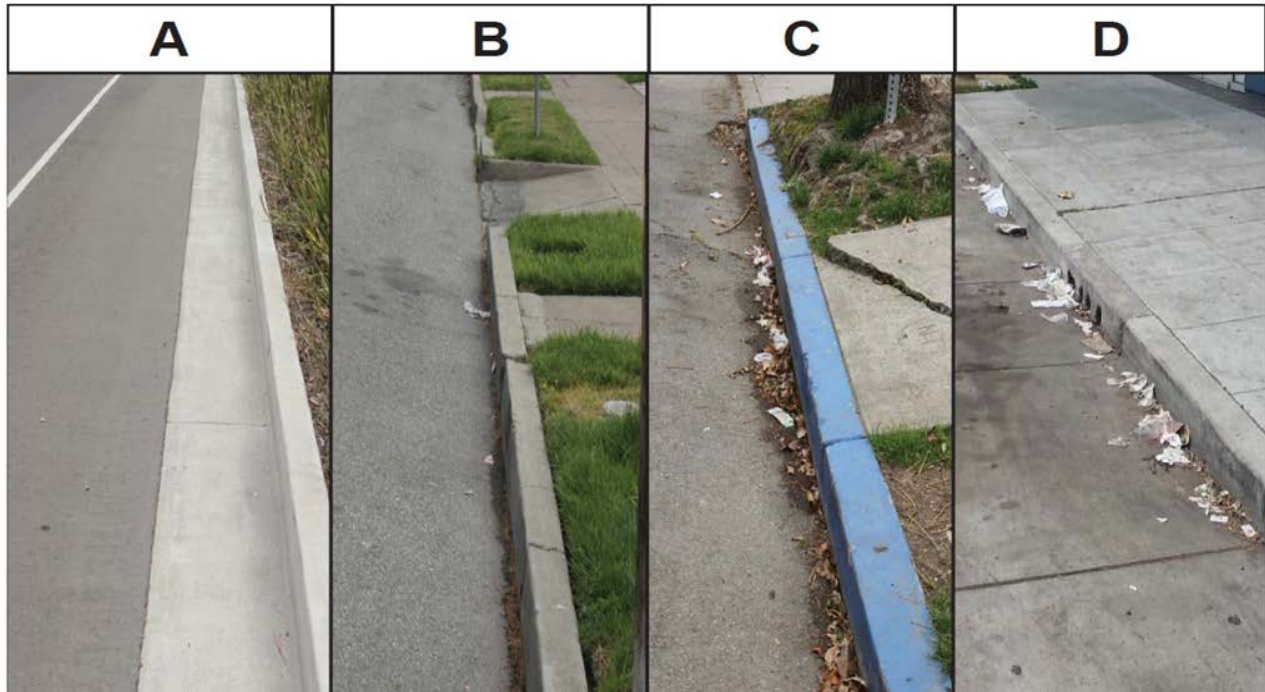
C.10.b.ii.a. Implementation Documentation – Documentation of trash management or control actions implemented and areas of implementation is essential to support trash reduction effectiveness and trash condition improvement.

C.10.b.ii.b.(i)-(iv)) Visual Assessment of Outcomes of Other Trash Management Actions – The primary tool currently available for determining trash reduction action success and positive outcomes is visual assessment, with photo documentation of trash generation and conditions in areas that drain to storm drains. Visual assessment involves observing a sufficient portion of each, e.g., sidewalk and curb area, at a frequency that adequately represents the trash management area condition relative to the type(s) of management actions implemented in the area. The frequency of required visual assessments depends on the rate of trash generation, the sources and types of trash, trash management actions deployed, and time of year. During the wet season, October through April, visual assessments in a trash

management area must be conducted at a frequency that determines whether there may be trash discharges to the storm drain system from sources or areas of trash accumulations before a trash management action or combination of actions is implemented or between recurring trash management actions. The degree of trash reduction that a Permittee claims also affects the frequency of visual assessment necessary to make the claim. Higher reduction claims typically require higher frequency of assessments.

During the wet season, for claims that a trash generation area has been reduced to a low trash generation area, this should be at least once per month in what was a very high trash generation area, at least twice per quarter in what was a high trash generation area, and once per quarter in what was a moderate trash generation area. Permittees, with justification, may conduct less frequent visual assessments for claims that a trash generation area has been reduced from what was a very high trash generation area to a high or moderate trash generation area or from what was a high trash generation area to a moderate trash generation area. Frequency of visual assessments during the dry season, May through September, should be at least once per quarter, including, and preferably, within the month (September) before the wet season begins. Higher frequencies of visual assessments than those illustrated above may be required to demonstrate effectiveness of trash control actions and claimed trash reduction. Lower frequencies than those illustrated above may also be acceptable with justification.

At this point in time, due to the lack of a standard method or protocol to effectively measure trash in receiving waters from municipal storm drains, visual assessment is the best type of monitoring to assure compliance with the Permit's requirements to implement trash management actions to reduce trash discharges into municipal storm drains. (See 40 CFR § 122.44(i).) The required amount, type, interval and frequency will yield data that is representative of the monitored activity, as required by 40 CFR § 122.48(b). This graphic demonstrates four trash visual conditions that correspond to the four trash generation categories of Very High (D), High (C), Moderate (B) and Low (A).



It is also possible to assess trash reduction outcome by documenting and verifying that trash management actions in a trash management area are equivalent to trash management actions implemented in an equivalent trash management area, and the actions in the equivalent trash management area have been assessed to be effective in accordance with a specified performance standard and the assessment results are reproducible. In such cases, it may be possible to extrapolate the performance assessment results to the equivalent trash management area with some verification. If this evidence is proposed by Permittees and accepted by the Executive Officer, Permittees may claim a similar trash reduction outcome by demonstrating that they have performed these trash reduction actions within similar trash management areas to the same performance standard.

C.10.b.iii. Percentage Discharge Reduction – Demonstration that trash management actions reduce trash generation from Very High, High, or Moderate to lower trash generation categories and the Low generation status during this permit term provides a practicable means of demonstrating trash load reduction and attainment of the 70 and 80 percent trash load reduction deadlines and consideration of the 2016 performance guideline (C.10.a.ii.a). However, trash management actions in Very High and High trash generation areas will result in more trash load reduction than actions in Moderate trash generation. Accordingly, a trash reduction demonstration methodology that provides relative benefit weight to actions in Very High and High areas is preferable to one that just considers percentage change in Very High, High, and Moderate trash generation area. The trash generation rates used by Permittees to delineate and map their 2009 trash generation area maps provide a means to provide a relative benefit weight to demonstrated reductions in the areas of Very High and High trash generation, even if they are not reduced all the way to Low generation.

The delineation of trash generation areas were based on ranges of trash generation rates (C.10.a.ii.). Therefore, the ratios of the approximate midpoints of the categorical trash generation ranges provides a means of weighing relative benefit to actions in Very High and High areas compared to actions in Moderate areas. The Moderate range is 5-10 gal/acre/yr, with a midpoint of 7.5 gal/acre/yr. The High range is 10-50 gal/acre/yr with a midpoint of 30 gal/acre/yr. Therefore, the weighed ratio of High to Moderate is $30/7.5 = 4$. The Very High range, greater than 50 gal/acre/yr, does not have a specified upper bound that allows calculation of a midpoint. An alternative that provides reasonable weighing of Very High is 90 gal/acre/yr, which is 40 percent higher than the low end of the Very High range. This results in a weighed ratio of Very High to Moderate of $90/7.5 = 12$.

The following formula provides a means of demonstrating attainment of the percent trash load reduction deadline and performance guidelines with weighted benefit of Very High and High trash generation area percent reductions relative to Moderate trash generation area percent reductions:

$$\% \text{ Reduction} = 100 [(12 A_{\text{VH}(2009)} + 4 A_{\text{H}(2009)} + A_{\text{M}(2009)}) - (12 A_{\text{VH}} + 4 A_{\text{H}} + A_{\text{M}})] / (12 A_{\text{VH}2009} + 4 A_{\text{H}2009} + A_{\text{M}2009})$$

where:

$A_{\text{VH}(2009)}$	=	total amount of the 2009 very high trash generation category
		jurisdictional area
$A_{\text{H}(2009)}$	=	total amount of the 2009 high trash generation category
		jurisdictional area
$A_{\text{M}(2009)}$	=	total amount of the 2009 moderate trash generation category
		jurisdictional area
A_{VH}	=	total amount of very high trash generation category
		jurisdictional area in the reporting year
A_{H}	=	total amount of high trash generation category
		jurisdictional area in the reporting year
A_{M}	=	total amount of moderate trash generation category
		jurisdictional area in the reporting year
12	=	Very High to Moderate weighing ratio
4	=	High to Moderate weighing ratio
100	=	fraction to percentage conversion factor

C.10.b.iv. Source Control – Jurisdiction-wide source control actions will have trash generation and load reduction benefit beyond what can be accounted for in trash management area specific assessment-based percentage discharge reduction (C.10.b.iii). These include Permittee efforts to adopt and implement source control on certain types of trash, particularly persistent, floating litter and other particularly difficult types of trash that are easily blown by the wind or clog full trash capture devices. This type of trash has been documented to be a significant percentage of the trash collected in full trash capture devices, and Permittees that have implemented such source control have documented significantly less such litter types in their hand collection of trash and litter on land. Permittees will be allowed to claim load

reduction compliance value of up to ten percent load reduction total for all such actions. This would be added to the % Reduction amount calculated by the C.10.b.iii - Percentage Discharge Reduction formula in demonstrating attainment of the percent trash load reduction deadline requirements and performance guideline. To claim a load percentage reduction value, Permittees must provide substantial evidence that these actions reduce trash by the claimed value. A Permittee may reference studies in other jurisdictions if it provides evidence that the implementation of source control in its jurisdiction is similarly implemented as the source control assessed in the reference studies. Source control load reduction value(s) will be reviewed during reissuance of the Permit, and value(s) for source control load reductions might not be continued and allowed in the next permit, particularly in areas where the value of source controls will be accounted for in observed reductions in trash in trash generation areas, to avoid double counting. Also, the focus of the next permit will move to attainment of the 2022 goal and consideration of receiving water condition compliance indicators, and source control load reduction values may no longer be relevant.

C.10.b.v. Receiving Water Monitoring – Receiving water monitoring for trash provides additional evidence and can verify that full trash capture systems and other trash management actions are preventing trash from discharging into receiving waters and whether additional actions may be necessary associated with sources within a Permittee’s jurisdiction. They can also show whether there are ongoing sources outside of the Permittee’s jurisdiction that are causing or contributing to adverse trash impacts in the receiving water(s). There are currently no standard methods and protocols for monitoring trash in receiving waters. However, BASMAA is developing and testing some trash monitoring tools and protocols via a California Proposition 84 grant funded project (Agreement # 12-420-550), *Tracking California’s Trash*. During this Permit term, the Permittees will develop and test trash receiving water monitoring tools and protocols designed, to the extent possible, to answer the following questions:

1. Have a Permittee’s trash control actions effectively prevented trash within a Permittee’s jurisdiction from discharging into receiving water(s)?
2. Is trash present in receiving water(s), including transport from one receiving water to another, e.g., from a creek to a San Francisco Bay segment, at levels that may cause adverse water quality impacts?
3. Are trash discharges from a Permittee’s jurisdiction causing or contributing to adverse trash impacts in receiving water(s)?
4. Are there sources outside of a Permittee’s jurisdiction that are causing or contributing to adverse trash impacts in receiving water(s)?

The monitoring tools and protocols may include direct measurements and/or observation of trash in receiving waters. In scenarios where direct measurements or observations are not feasible, surrogates for trash in receiving waters, such as measurement or observation of trash on shorelines or creek banks may provide a practicable means of monitoring trash. This includes consideration and appropriate simplification of the shoreline and creek bank trash assessment method developed by

Water Board staff, *Rapid Trash Assessment Method Applied to Waters of the San Francisco Bay Region: Trash Measurement in Streams. Surface Water Ambient Monitoring Program*. April 2007.

The goal is to establish the least expensive and simplest to use monitoring methods and protocols that are applicable to the various discharge and receiving water scenarios that accounts for the various receiving waters and watershed, community, and drainage characteristics within Permittees' jurisdictions that affect the discharge of trash and its fate and effect in receiving water(s). These and other factors, such as feasibility, location logistics, types of trash, complexity, and costs, provide a means to focus and limit the number of monitoring tools and protocols, and determine spatial and temporal representativeness of the tools and protocols, representativeness of scenarios that will be tested.

Keys to establishing the least expensive and simplest to use monitoring methods and protocols include: their acceptance and use by interested parties; ensuring their scientific integrity by having them peer reviewed; and a user-friendly system to manage and access monitoring results. To provide a balance between allowing time to develop and test the tools and protocols and allowing enough time to review the proposed monitoring program in advance of reissuance of the Permit, Permittees must submit a preliminary report on the proposed monitoring program by July 1, 2019, a year in advance of the final proposed monitoring program due July 1, 2020, six months before the Permit expires. This should allow for early resolution of some monitoring program issues that are not dependent on completion of tests. Given the interest in receiving water monitoring by multiple parties, Permittees are encouraged to conduct development and testing of the tools and protocols and development of the monitoring program through an independent third party, such as the San Francisco Estuary Institute, that provides for interested party participation and scientific peer review of the work. Permittees will not be required to submit the preliminary monitoring program report if the work is conducted by an independent third party.

C.10.c. Trash Hot Spot Selection and Clean Up

The previous permit included a requirement for Permittees to cleanup a minimum number of Trash Hot Spots in receiving waters or on shorelines or creek banks associated with their jurisdictions. Trash Hot Spot cleanups remove trash discharged from a Permittee's jurisdiction and lessen the adverse impacts from the discharges until they are abated by a Permittee's trash management actions. Trash Hot Spot cleanups have an added benefit in that they may also remove discharges of trash from non-storm drain sources, e.g., direct dumping or homeless encampments. They also provide an additional means of assessing the effectiveness of Permittees' trash management actions and identification of the types and sources of trash. The required Trash Hot Spot assessment is based on the SWAMP Rapid Trash Assessment Protocol.

C.10.d. Trash Load Reduction Plans

The previous permit required Permittees to prepare a Plan to achieve the 2017 and 2022 trash reduction deadline requirements. A Trash Load Reduction Plan provides a means for Permittees to determine and account for appropriate trash management actions in their

trash management areas and their schedule of implementation, and it provides documentation of planned actions that can be referenced if annual performance guidelines are not met. It also provides a basis for justifying and accounting for the types and locations of Permittees' assessments of trash management actions, and for optional trash load offset opportunities allowed by C.10e.

C.10.e. Optional Trash Load Reduction Offset Opportunities

C.10.e.i. Additional Creek and Shoreline Cleanup - Some Permittees cleanup more than the minimum required C.10.c Trash Hot Spot cleanups. These additional creek and shoreline cleanups are of value in removing trash from shorelines and creeks or creek banks that are causing or may cause adverse impacts to receiving waters. Permittees conduct some of these additional cleanups with community volunteers, which creates additional public outreach and participation benefits.

The volume of trash removed in these cleanups tends to be high compared to the estimated volume rate loads calculated using the average (nominal midpoint) trash generation rates (C.10.a.ii). This is due in part to Trash Hot Spot locations, which are often downstream of Very High and High trash generation areas with actual generation rates at the upper end of those category ranges. Another reason may be that these cleanups likely remove trash from direct discharges other than from Permittees' storm drain systems. Also, these cleanups sometimes occur just one-time so the volume of trash removed cannot be directly compared with required trash reduction rate volumes.

One way to recognize the value of these additional cleanups and to account for the short-term benefit (volume) of cleanups compared to ongoing trash load discharges (average volume /time) is to use an offset ratio of three to one for the 2016 performance guideline and 2017 mandatory trash load reduction deadline, and ten to one for the 2019 mandatory trash load reduction deadline, when comparing additional cleanup volumes with 2009 trash load estimates based on using average trash generation category values and to cap the offset amount. The following formula generates a Permittee-specific trash volume amount, based on its 2009 categorical trash generation areas and a three to one or ten to one offset ratio, which may be used to offset one percent of a required percent load reduction value:

$$1\% \text{ Reduction Offset (volume)} = (12 A_{\text{VH}(2009)} + 4 A_{\text{H}(2009)} + A_{\text{M}(2009)}) OF$$

where:

$A_{\text{VH}(2009)}$ = total amount of 2009 very high trash generation category jurisdictional area

$A_{\text{H}(2009)}$ = total amount of 2009 high trash generation category jurisdictional area

$A_{\text{M}(2009)}$ = total amount of 2009 moderate trash generation category jurisdictional area

12 = Very High to Moderate weighing ratio

4 = High to Moderate weighing ratio

OF = offset factor equal to (7.5×0.033) for the 2016 performance guideline and 2017 mandatory trash load reduction deadline, where 7.5 is the conversion from acres to gallons based on trash

generation rates and 0.033 is the three to one offset ratio, or (7.5 x 0.1) for the 2019 mandatory trash load reduction deadline, where 7.5 is the conversion from acres to gallons based on trash generation rates and 0.1 is the ten to one offset ratio.

A Permittee can compare trash volumes collected from additional cleanups to this calculated offset volume and apply one percent offset to a C.10.a.i percent load reduction requirement for each collected volume that equals the 1% Reduction Offset (volume). However, the total offset that can be claimed to avoid over-compensation associated with the short-term benefit (volume) of cleanups compared to ongoing trash load discharges (average volume/time) is limited to ten percent. Furthermore, to justify the offset the associated cleanups must occur more than once per year and preferably at a frequency sufficient to demonstrate sustained improvement of a creek or shoreline area. Offset values will be reviewed during reissuance of the permit, and value(s) for cleanups might not be continued and allowed in the next permit, particularly in areas where Permittees have responsibility for discharges of trash to a cleanup area. The focus of the next permit will move to attainment of the 2022 goal and consideration of receiving water condition compliance indicators, and cleanup values may no longer be relevant.

C.10.e.ii. Direct Discharge Controls - Some Permittees are faced with the challenge that large amounts of trash are discharged to receiving waters in their jurisdiction from homeless encampments and direct dumping. These trash discharges are separate from and in addition to discharges from Permittee storm drain systems. Elimination and prevention of adverse water quality impacts due to trash and attainment of water quality standards in receiving waters will require management of these non-storm drain system discharges in addition to control of storm drain system trash discharges by Permittees. Accordingly, some Permittees are taking or are willing to take actions to control these other sources by implementing a comprehensive plan to control all sources of trash discharged to receiving waters in their jurisdiction. Accordingly, Permittees should be allowed to offset some of their percent load reduction requirements if they control these other sources.

Permittees have and likely will continue to demonstrate the benefit of controlling these additional sources by accounting for the volume of trash collected. As with additional creek and shoreline cleanups, the volume of trash removed cannot be compared directly with trash load discharge rate (volume/time). The simplest, and possibly only way to account for these additional control actions, until more rigorous assessment and accountability methods are developed, is to allow a Permittee to offset part of its C.10.a trash load percent reduction requirement using the C.10.e.i formula to determine an offset from additional creek and shoreline cleanup. However, since control of these other sources by Permittees will be through implementation of a comprehensive and sustained program, Permittees that implement a comprehensive plan approved by the Executive Officer merit a higher offset cap than that allowed by C.10.e.i for additional creek and shoreline cleanup. A fifteen percent offset-cap based on the C.10.e.i formula provides a balance between incentive and reward for control of these non-storm drain system sources and the uncertainties associated with the

simple formula. It is likely that this offset will be removed from this provision during the next permit term. This will occur as the 2022 target deadline approaches and the focus turns to determining the condition of the receiving waters to determine compliance.

C.10.f. Reporting

The reporting requirements reflect the minimum amount of information needed to demonstrate compliance with all Provision C.10 requirements.

Costs of Trash Control

With the assistance of a \$5 million grant from the American Recovery and Reinvestment Act obtained and distributed by the San Francisco Estuary Partnership, the Permittees cumulatively exceeded the full trash capture permit requirement acreage by over a factor of four. Therefore, it would appear that the following cost estimate produced in 2008 significantly over-estimated the costs of full trash capture installation at the time.

Costs for either enhanced trash management measure implementation or installation and maintenance of trash capture devices are significant, but when spread over several years, and when viewed on a per-capita basis, are reasonable.

Trash is costly to remove from our aquatic resource environments. Staff from the California Coastal Commission report that the Coastal Cleanup Day budget statewide: \$200,000-250,000 for Coastal Commission staff, and much more from participating local agencies. The main component of this event is the 18,000 volunteer-hours, which translates to \$3,247,200 in labor, and so is equivalent to \$3,250,000-3,500,000 per year to clean up 903,566 pounds of trash and recyclables at \$3.60 to \$3.90 per pound. This is one of the most cost-effective events because of volunteer labor and donations. The County of Los Angeles spends \$20 million per year to sweep beaches for trash, according to Coastal Commission staff.

Mr. Morad Sedrak, the TMDL Implementation Program Manager, Bureau of Sanitation, Department of Public Works, City of Los Angeles, reports that the City plans to invest \$72 million dollars for storm drain catch basin based capture device installation primarily, for a City of 4 million population, for a per-capita cost of \$18 dollars. This effort is occurring over a span of over five years, for an annual per-capita cost of under \$4.

Mr. Sedrak reports that O&M costs are not anticipated to increase, as the City of L.A. is already budgeted for 3 catch basin cleanings per year. He also states that catch basin inserts installed inside the catch basin in front of the lateral pipe, which have been certified by the Los Angeles Regional Water Board as total capture trash control devices, cost approximately \$800 to \$3,000 (including installation) depending on the depth of the catch basin. .

Furthermore, the price for catch basin opening screen covers, which are designed to retain trash at the street level for removal by sweepers, and also to open if there is a potential flooding blockage, ranges roughly from \$800 to \$4,500, depending on the opening size of the catch basin.

The City of Los Angeles has currently spent 27 million dollars on a retrofit program to install catch basin devices in approximately 30% of its area, with either inserts or screens or both. Mr. Sedrak states that Los Angeles plans to spend \$45 million over the next 3 years to retrofit the remaining catch basins within the City. The total number of catch basins within the City is approximately 52,000.

The following are links to information about the Los Angeles trash control approach:

<http://www.lastormwater.org/Siteorg/program/TMDLs/trashtmdl.htm>

http://www.lastormwater.org/Siteorg/download/pdfs/general_info/Request-Certification-10-06.pdf

http://www.lastormwater.org/Siteorg/download/pdfs/general_info/Request-Certification-10-06.pdf

http://www.lastormwater.org/Siteorg/program/poll_abate/cbinserts.htm

http://www.lastormwater.org/Siteorg/program/poll_abate/cbscreens.htm

In Oakland, the Lake Merritt Institute is currently budgeted at \$160,000 per year, with trash and litter removal from the Lake as a major task. The budget has increased from about \$45,000 in 1996 to current levels. In the period of 1996-2005 the Lake Merritt Institute staff, utilizing significant volunteer resources, and accomplishing other education tasks, removed 410,859 pounds of trash from the Lake at cost of \$951,725, or \$2.30 per pound.

The City of Oakland reports that installation of two vortex and screen separators cost \$821,000 for installations and treat tributary catchments of 192 acres before discharge to Lake Merritt (a cost of \$4,276 per acre). The following table details these costs and other pertinent information

City of Oakland—CDS Unit Overview 9-07

Existing CDS unit location	Outfall number	Treatment area (acres)	Cost of implementation	Sizing	Maintenance requirements	Comments
Intersection of 27 th and Valdez Streets	56*	71	\$203,000 to contractor; plus ~\$100,000 City costs	73 cfs peak flow; 36" stormdrain; Unit sizing: 18'6"6" box with 10'11" diam x 9'6" long cylinder	Visually inspect CDS Unit; remove trash and debris with Hydro Flusher bi-monthly	Installed in 2006. Required relocation of electrical conduit. Water main and gas line were also in the way; the box was adjusted to accommodate these conflicts.
Intersection of 22 nd and Valley Streets	56*	121	\$368,000 to contractor; plus ~\$150,000 City costs	115 cfs peak flow; 54" storm drain; Unit sizing: 18'8.5'6" box with 12' diam x 9'6" long cylinder	Visually inspect CDS Unit; remove trash and debris with Hydro Flusher bi-monthly	Installed in 2006. Installation costs were higher than anticipated. Sewer lines and PGE facilities were exposed that were not known before. Unit had to be modified and poured-in-place.

* The City is treating 192 acres or 72 percent of the 252 acres draining to outfall number 56.

Additional cost information on various trash capture devices is included in the Santa Clara Valley Urban Runoff Pollution Prevention Program BMP Trash Toolbox (July 2007). The Toolbox contains cost information for both trash capture devices and enhanced trash management measure implementation, covers a broad range of options and also discusses operation and maintenance costs. Catch basin screens are included with an earlier estimate by the City of Los Angeles of \$44 million over 10 years to install devices in 34,000 inlets.

The City of Oakland provided information on the cost of trash booms. The Damon Slough trash boom or sea curtain cost \$36,000 for purchase and installation, including slough side access improvements for maintenance and trash removal. Annual maintenance costs have been \$77,000 for weekly maintenance, which includes use of a crane for floating trash removal.

C.11. Mercury Controls

The purpose of this provision is to implement the urban runoff requirements of the San Francisco Bay and Guadalupe River Watershed mercury TMDLs and reduce mercury loads to make substantial progress toward achieving the urban runoff mercury wasteload allocations established for the TMDLs.

The C.11 provisions follow the general approach for sediment-bound pollutants discussed above (General Strategy for Sediment-Bound Pollutants (Mercury and PCBs)) and accordingly, build on understanding gained from pilot testing many control measures during the Previous Permit term. During this Permit term Permittees are expected to continue to improve the level of certainty concerning control measure benefit and effectiveness by implementing actions in a phased approach, and then expand implementation of those actions that prove effective, and perhaps scale back or discontinue those that are not effective.

However in contrast to the Previous Permit term, this Permit does not specify control measures to implement to achieve load reductions. Rather, the permit requires development and implementation of a load reduction accounting scheme along with a quantitative demonstration of the load reductions that result from implementation of all relevant control measures. The Permittees may comply with any requirement of this provision through a collaborative effort. Many of the control measures may be chosen primarily for the purpose of achieving PCBs load reductions, but substantial mercury load reductions may result as a tangential benefit and should be accounted for.

Fact Sheet Findings in Support of Provision C.11

- C.11-1** On August 9, 2006, the Water Board adopted a Basin Plan amendment including a revised TMDL for mercury in San Francisco Bay, two new water quality objectives, and an implementation plan to achieve the TMDL. The State Water Board and U.S. EPA have also approved this Basin Plan amendment. C.11-3 through C.11-7 are components of the Mercury TMDL implementation plan relevant to implementation through the municipal stormwater permit.
- C.11-2** On October 8, 2008, the Water Board adopted a Basin Plan amendment including a TMDL for mercury in the Guadalupe River Watershed (GRW) and an implementation plan to achieve the TMDL. The State Water Board and U.S. EPA have also approved this Basin Plan amendment. The GRW mercury TMDL assigns an urban stormwater runoff allocation proportionally equivalent to the mass allocation in the San Francisco Bay mercury TMDL. Accordingly, the GRW urban stormwater runoff mercury allocation is simply the fraction of the Santa Clara Valley Urban Runoff Pollution Prevention Program allocation attributed to the Guadalupe River watershed. The urban stormwater runoff allocation implicitly includes all current and future permitted discharges within the geographic boundaries of municipalities and unincorporated areas including, but not limited to, California Department of Transportation (Caltrans) roadways and non-roadway facilities and rights-of-way, atmospheric deposition, public

facilities, properties proximate to stream banks, industrial facilities, and construction sites.

- C.11-3** The 2003 load of mercury from urban runoff was estimated to be 160 kg/yr, and the aggregate WLAs for urban runoff is 82 kg/yr and shall be implemented through the NPDES stormwater permits issued to urban runoff management agencies and Caltrans. The urban stormwater runoff allocations implicitly include all current and future permitted discharges, not otherwise addressed by another allocation, and unpermitted discharges within the geographic boundaries of urban runoff management agencies (collectively, *source category*) including, but not limited to, Caltrans roadway and non-roadway facilities and rights-of-way, atmospheric deposition, public facilities, properties proximate to stream banks, industrial facilities, and construction sites.
- C.11-4** The allocations for this source category shall be achieved within 20 years, and, as a way to measure progress, an interim loading milestone of 120 kg/yr, halfway between the current load and the allocation, should be achieved within 10 years. If the interim loading milestone is not achieved, NPDES-permitted entities shall demonstrate reasonable and measurable progress toward achieving the 10-year loading milestone.
- C.11-5** The NPDES permits for urban runoff management agencies shall require the implementation of BMPs and control measures designed to achieve the allocations or accomplish the load reductions derived from the allocations. In addition to controlling mercury loads, BMPs or control measures shall include actions to reduce mercury-related risks to humans and wildlife. Requirements in the permit issued or reissued and applicable for the term of the permit shall be based on an updated assessment of control measures intended to reduce pollutants in stormwater runoff and remain consistent with the section of the Basin Plan chapter titled, *Surface Water Protection and Management—Point Source Control—Stormwater Discharges*.
- C.11-6** The following additional requirements are or shall be incorporated into NPDES permits issued or reissued by the Water Board for urban runoff management agencies.
- a. Evaluate and report on the spatial extent, magnitude, and cause of contamination for locations where elevated mercury concentrations exist;
 - b. Continue to develop and implement a mercury source control program;
 - c. Implement a monitoring system to quantify either mercury loads or loads reduced through treatment, source control, and other management efforts;
 - d. Monitor levels of methylmercury in discharges. This requirement was satisfactorily accomplished during the last permit term and will not be included in the permit during this permit term;
 - e. Conduct or cause to be conducted studies aimed at better understanding mercury fate, transport, and biological uptake in San Francisco Bay and tidal

areas. This requirement is not necessary at the moment and will not be included in the permit during this permit term;

- f. Develop an equitable allocation-sharing scheme in consultation with Caltrans to address Caltrans roadway and non-roadway facilities in the program area, and report the details to the Water Board (This was satisfactorily accomplished during the last permit term);
- g. Prepare an Annual Report that documents compliance with the above requirements and documents either mercury loads discharged, or loads reduced through ongoing pollution prevention and control activities; and
- h. Demonstrate progress toward (a) the interim loading milestone, or (b) attainment of the allocations shown in Individual WLAs (see Table 4-w of the Basin Plan amendment), by using one of the following methods:
 - (1) Quantify the annual average mercury load reduced by implementing
 - i. Pollution prevention activities, and
 - ii. Source and treatment controls. The benefit of efforts to reduce mercury-related risk to wildlife and humans should also be quantified. The Water Board will recognize such efforts as progress toward achieving the interim milestone and the mercury-related water quality standards upon which the allocations and corresponding load reductions are based. Loads reduced as a result of actions implemented after 2001 (or earlier if actions taken are not reflected in the 2001 load estimate) may be used to estimate load reductions.
 - (2) Quantify the mercury load as a rolling 5-year annual average using data on flow and water column mercury concentrations.
 - (3) Quantitatively demonstrate that the mercury concentration of suspended sediment that best represents sediment discharged with urban runoff is below the suspended sediment target.

C.11-7 Urban runoff management agencies have a responsibility to oversee various discharges within the agencies' geographic boundaries. However, if it is determined that a source is substantially contributing to mercury loads to the Bay or is outside the jurisdiction or authority of an agency, the Water Board will consider a request from an urban runoff management agency that may include an allocation, load reduction, and/or other regulatory requirements for the source in question.

C.11-8 Recent estimates using the latest available data suggest that the urban runoff mercury loading to San Francisco Bay is on the order of 115 kg/yr (McKee and Yee 2015⁶¹). While this figure is based on environmental data and thus has

⁶¹ McKee, L.J. and Yee, D., 2015. Sources, Pathways and Loadings: Multi-Year Synthesis. A technical report prepared for the Regional Monitoring Program for Water Quality in San Francisco Bay (RMP), Sources, Pathways and Loadings Workgroup (SPLWG), Small Tributaries Loading Strategy (STLS). San Francisco Estuary Institute, Richmond, California.

inherent uncertainty associated with it, it suggests that current mercury loading is approximately equal to the interim TMDL loading milestone (to be reached at the half-way point of TMDL implementation, 2017) of 120 kg/yr. If mercury loads can be reduced by approximately 35 additional kg/yr, urban runoff loading would meet the TMDL wasteload allocation.

- C.11-9** Mercury is distributed more uniformly throughout the urban landscape than PCBs. For example, loading from older industrial and other polluted source areas accounts for only 6% of the average annual mercury load, but these areas account for over 50% of the average annual PCBs load (McKee and Yee 2015). The likely stronger role of atmospheric deposition in the case of mercury, which may account for up to 50% of the mercury found in urban runoff, is part of the reason for the more uniform mercury distribution in the landscape (McKee and Yee 2015).
- C.11-10** Monitoring data indicate that, while not always the case, watersheds with high PCBs concentrations often contain high or moderately high mercury concentrations (McKee and Yee 2015). Therefore, control strategies focused on finding and managing PCBs-contaminated drainages will often yield mercury load reduction benefits as well.
- C.11-11** This provision is consistent with a recent U.S. EPA memorandum⁶² providing guidance on implementing TMDL WLAs in NPDES stormwater permits. Specifically, this provision establishes clear and concrete milestones and deadlines (see C.11.a.iii) for the activities associated with achieving mercury load reductions as well as other requirements (see C.11.b-h.), necessary to achieve receiving water limits of this [Permit](#) term relative to the mercury TMDL WLA.

Specific Provision C.11 Requirements

Provision C.11.a. requires Permittees to implement control measures to achieve mercury load reductions. In order to comply with this requirement, Permittees must identify the mercury control measures and the watersheds and management areas in which these measures will be implemented and a time schedule for implementation. Moreover, Permittees must demonstrate quantitatively the load reductions achieved through use of the accounting scheme developed through C.11.b.

This provision is critical to the successful implementation of the urban runoff requirements from the mercury TMDL. The accountability mechanism for control measure implementation consists of three parts: 1) the identification of control measures and associated watersheds and management areas, 2) a commitment to an implementation schedule, and 3) the quantification of load reductions resulting from control measure implementation. Many or most of the control measures that will generate mercury reduction benefits will be chosen based on the benefit for PCBs load reductions.

⁶² U.S. EPA. November 26, 2014. Revisions to the November 22, 2002 Memorandum “Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs”

Available data indicate that this strategy of focusing on PCBs will yield mercury load reductions in many circumstances. However, there are conceivable control measures that are unique to mercury, like those addressing collection and recycling of mercury-containing devices, and these are, in fact, required by household hazardous waste and producer responsibility laws.

Recent loading estimates suggest that current mercury loading to the Bay is at or below the interim loading milestone established in the TMDL. Moreover, mercury is more evenly distributed in the landscape than PCBs so there are fewer opportunities to find and address heavily contaminated (with mercury) sites to achieve substantial, short-term load reductions. Instead, much of the additional benefit to reduce mercury urban runoff loads will come from a combination of proper disposal and management of mercury containing products as well as much more extensive treatment elements (e.g., green infrastructure) incorporated into the stormwater infrastructure. For these reasons, short-term load reduction performance criteria are not included in C.11.a (in contrast to C.12.a for PCBs).

Provision C.11.b. requires Permittees to develop and implement an assessment methodology and data collection program to quantify mercury loads reduced through implementation of any and all pollution prevention, source control and treatment control efforts required by the provisions of this Permit or load reductions achieved through other relevant efforts not explicitly required by the provisions of this Permit.

Permittees submitted land-use mass yields of mercury in their 2014 Integrated Monitoring Report (IMR) for the Previous Permit. When these yields were multiplied by the total area of various land-use categories, the estimated regionwide (for the entire region that discharges to the Bay) mercury load was lower than the load estimated in the mercury TMDL by approximately a factor of 1.3. Therefore, the land-use yields were multiplied by a factor of 1.3 in order to normalize to the estimated baseline mercury load in the mercury TMDL and to agree with recent load estimates from runoff. The resultant (adjusted) mass yields for three land-use types shown here are based on data Permittees collected during the Previous Permit term and provide a reasonable means of calculating the mercury load reductions for control measures implemented in corresponding areas. Permittees may refine these yields when they submit supporting documentation in their 2016 Annual Report.

- Old Industrial Land Use = 1300 mg mercury/acre/year
- Old Urban Land Use = 215 mg mercury/acre/year
- New Urban areas and Other = 33 mg mercury/acre/year

The land-use yield provides a convenient way to calculate the resulting load reduction of various sorts of control measure strategies. For example, when contaminated areas are **newly or redeveloped**, the pollutant yield of the area will be reduced through a variety of mechanisms (i.e., removal, capping, paving of contaminated sediment). So, the amount of mercury load reduction can be obtained by multiplying the area of new/redevelopment by the difference in yield (either old industrial minus new urban or old urban minus new urban, whichever pre-development land-use is applicable).

The mercury load reductions for **retrofits or other treatment controls** (including green infrastructure) can be calculated by multiplying the area treated by the assumed land-use yield of the treated area multiplied by the efficiency factor of the treatment method (using a default value of 70 percent or an efficiency established through documentation of implemented method and reported in annual reports).

For **contaminated private properties** that are referred to the Water Board or other agencies for subsequent remediation, the estimated load reduction can be derived by assuming that the mercury yield of the source area is reduced over the course of site cleanup from a high yield to the old urban yield (215 mg mercury/acre/year). Source areas identified for the purpose of referral tend to have much higher areal yields, but data are not currently available to provide an interim estimate for the mercury yield of such contaminated sites. Permittees would need to provide this information prior to receiving mercury load reduction credit from referral of private properties for cleanup.

This provision allows the opportunity for Permittees to update their default load reduction accounting factors, as adjusted by the Water Board, and in some cases extending the accounting framework presented in the IMR, justifying assumptions and parameters used to quantify the load reduction for each type of control measure, and indicating what information will be collected to confirm the load reduction for each type of implemented control measure. Any adjustments to the default accounting framework must be submitted for Executive Officer approval.

Provision C.11.c Available information suggests that mercury is distributed more uniformly throughout the Bay Area landscape than is the case for PCBs. Therefore, a focus on highly contaminated areas (with mercury) may not be enough to achieve the TMDL-required load reductions. A critical part of the strategy to reduce urban runoff mercury loads will be the widespread implementation of green infrastructure control measures to intercept mercury-containing sediment and stormwater before it is discharged to receiving water. Provision C.11.c requires Permittees to implement green infrastructure projects during the term of the permit to achieve mercury load reductions of 48 g/year by June 30, 2020. This green infrastructure load reduction requirement is feasible in that these load reductions are approximately equivalent to the scale of load reduction achieved during the Previous Permit term through green infrastructure and C.3-related treatment controls (Integrated Monitoring Report 2014). It is reasonable to expect that a similar or greater pace of redevelopment plus green infrastructure implementation on public property can be achieved during this Permit term. The green infrastructure load reduction requirement is warranted because it is important to provide a clear performance expectation for Permittees for green infrastructure implementation because widespread and effective green infrastructure implementation will be an important component of achieving the load reductions necessary to achieve the mercury TMDL wasteload allocation.

County-specific load reductions are derived from the allocations and load reductions stated in the mercury TMDL. Namely, the TMDL-required load reduction for a county was divided by the total TMDL-required load reduction for the permit area (the area covered by this Permit) and this fraction was multiplied by 48 g/yr to derive the county-

specific green infrastructure load reduction requirement. While not required in the Permit, it will be essential to develop effective and easy-to-use tracking and visualization tools so Permittees, regulators, and stakeholders can monitor progress of green infrastructure implementation and its water quality impacts.

Because mercury is distributed throughout the urban landscape, extensive implementation of green infrastructure elements is going to be necessary to achieve the load reductions required by the TMDL. However, the planning, financing and implementation of green infrastructure is going to take a long time, perhaps as much as 25 years or more. This also means that the load reduction benefits of such implementation will also be realized over an extended time frame. To ensure that Bay Area municipalities are working effectively and expeditiously in implementing appropriate green infrastructure controls to reduce loads of mercury, PCBs and other pollutants of concern, the Permit requires Permittees to prepare a reasonable assurance analysis to rigorously and quantitatively demonstrate that mercury load reductions of at least 10 kg/yr throughout the permit area will be achieved over the course of the next 25 years (i.e., by 2040) through implementation of green infrastructure throughout the permit area..

Preparing the reasonable assurance analysis will be a step-wise process. Permittees must: establish the relationship between areal extent of green infrastructure implementation and mercury load reductions, estimate the amount and characteristics of land area that will be treated through green infrastructure in future years, and estimate the amount of mercury load reductions that will result from green infrastructure implementation by specific future years. Ultimately, the reasonable assurance analysis will require the use of one or more models. Permittees must therefore ensure that the calculation methods, models, model inputs and modeling assumptions used to make the demonstration have been validated through a peer review process.

Fortunately, the permittees in the Bay Area can take advantage of related (reasonable assurance analysis) efforts already underway in Southern California. The Los Angeles Regional Water Board has produced a useful set of guidelines for conducting a Reasonable Assurance Analysis (RAA) for the watershed management programs that are required through their MS4 permits.⁶³ These guidelines provide an excellent reference and starting point for the RAA required through C.11/12.c in terms of the mechanics of the analysis, BMP identification, critical condition selection, choice of models, model calibration criteria, modeling inputs, and model outputs. The crucial feature of the Southern California RAAs is that they must demonstrate with sufficient analytical rigor that the suite of foreseeable control measures to reduce loads will result in compliance with final WLAs. The RAA performed for PCBs and mercury for the San Francisco Bay Area will be similar in many respects to the type of analysis described in the Southern California guidance document, but they must also account for the local watershed characteristics as well as what has been learned about the distribution, fate, and transport characteristics of PCBs and mercury.

⁶³ Los Angeles Regional Water Quality Control Board (LARWQCB) 2015. *Guidelines for Conducting Reasonable Assurance Analysis in a Watershed Management Program, Including an Enhanced Watershed Management Program.*

Provisions C.11.d requires Permittees to prepare a long-term plan and schedule for mercury control measure implementation and corresponding reasonable assurance analysis quantitatively demonstrating that sufficient control measures will be implemented to attain the mercury TMDL wasteload allocations. The type of analysis for this provision shares many features with the one conducted as part of C.11.c.

The mercury TMDL anticipated the challenge of achieving the urban runoff mercury load reductions required to meet the TMDL allocations within the twenty-year implementation time frame. The TMDL implementation plan states that

“the Water Board will consider modifying the schedule for achievement of the load allocations for a source category or individual discharger provided that they have complied with all applicable permit requirements and all of the following have been accomplished relative to that source category or discharger:”

- *A diligent effort has been made to quantify mercury loads and the sources of mercury and potential bioavailability of mercury in the discharge;*
- *Documentation has been prepared that demonstrates that all technically and economically feasible and cost effective control measures recognized by the Water Board as applicable for that source category or discharger have been fully implemented, and evaluates and quantifies the comprehensive water quality benefit of such measures;*
- *A demonstration has been made that achievement of the allocation will require more than the remaining 10 years originally envisioned; and*
- *A plan has been prepared that includes a schedule for evaluating the effectiveness and feasibility of additional control measures and implementing additional controls as appropriate.*

Provision C.11.d provides the opportunity for Permittees to describe the full suite of actions that will be required to achieve the TMDL along with realistic timelines for this achievement. For example, as explained previously the load reductions for mercury are going to depend heavily on long-term implementation of control strategies (like green infrastructure) that extend beyond the current implementation timeframe of the mercury TMDL. The long-term plan and schedule required as part of this provision will lay the foundation for a formal recognition of an implementation timeframe that is longer than originally conceived in the TMDL.

Provision C.11.e requires actions that manage human health risk due to mercury and PCBs. These may include efforts to communicate the health risks of eating Bay fish and other efforts aimed at high risk-communities such as subsistence fishers and their families. The risk reduction framework developed in the previous permit term, which funded community based organizations to develop and deliver appropriate communications to appropriately targeted individuals and communities, is an appropriate approach.

C.12. PCBs Controls

The purpose of this provision is to implement the urban runoff requirements of the San Francisco Bay PCBs TMDL and reduce PCBs loads to make substantial progress toward achieving the urban runoff PCBs wasteload allocations established for the TMDL. In order to make substantial progress, Permittees must implement PCBs control measures strategically during this Permit term. Moreover, aggressive control measure implementation combined with thoughtful planning for the future (see C.12.d) are conditions that must be satisfied before the Water Board can consider an implementation timeframe longer than the 20 years provided in the TMDL.

The C.12 requirements follow the general approach for sediment-bound pollutants discussed above (General Strategy for Sediment-Bound Pollutants (Mercury and PCBs)) and accordingly, build on understanding gained during the Previous Permit term. During the Previous Permit, Permittees were required to pilot test a variety of control measures in a limited number of watersheds or portions of a watershed (management area). Building on that knowledge, this provision requires Permittees to implement PCBs control measures (source control, treatment control and/or pollution prevention strategies) in areas where benefits are most likely to accrue (focused implementation) and to report on the loads reduced through implementation of those control measures.

In contrast to the Previous Permit, this Permit does not require implementation of specific control measures. Rather, the Permittees must use their judgment and knowledge of their watersheds to choose the optimum suite of control measures in order to optimize PCBs load reductions. A technically sound load reduction accounting method, based on information gained during the testing phase and based on information reported at the end of the Previous Permit, is provided in this Permit Fact Sheet to provide certainty for Permittees.

As discussed below, based on information gained during control measure pilot testing and reported during the Previous Permit term, load reductions on the order of those required by this Permit are achievable (see Basis for Required PCBs Load Reductions in MRP 2, February 23, 2015) and necessary in order to make progress toward achieving the regionwide urban runoff wasteload allocation of 2 kg/yr (representing a load reduction from all urban runoff sources of approximately 18 kg/yr compared to loads estimated using data collected in 2003) within the 20-year TMDL timeframe. Further, load reductions resulting from a variety of PCBs control measures may be feasibly calculated in a straightforward manner (see below), and numeric load reduction requirements provide an unambiguous accountability metric against which to evaluate the sufficiency of control measure implementation. In contrast, it is problematic to assess the sufficiency of Permit requirements that merely call for the implementation of BMPs without a specification of the extent or intensity of such BMP implementation. Because specific load reductions are called for by the TMDL, the approach employed in the Permit (specific load reduction requirements) is both more straightforward and appropriate.

The area covered by the Permit (permit area) is smaller than the region that discharges to the Bay. The discharges in the permit area have been allocated 1.6 kg/yr of the total 2 kg/yr wasteload allocation and the total load reductions required from Permittees in the permit area during TMDL implementation is 14.4 kg/yr of the 18 kg/yr regionwide total.

Fact Sheet Findings in Support of Provision C.12

C.12-1 On February 13, 2008, the Water Board adopted a Basin Plan amendment establishing a TMDL for PCBs in San Francisco Bay and an implementation plan to achieve the TMDL. U.S. EPA approved the TMDL on March 29, 2010.

C.12-2 The following excerpts from the TMDL implementation plan are relevant to implementation of the municipal stormwater permit:

“The 2003 load of PCBs from urban runoff is 20 kg/yr, and the aggregate WLAs for urban runoff total 2 kg/yr. Stormwater runoff wasteload allocations shall be achieved within 20 years and shall be implemented through the NPDES stormwater permits issued to stormwater runoff management agencies and the California Department of Transportation (Caltrans). The urban stormwater runoff wasteload allocations implicitly include all current and future permitted discharges, not otherwise addressed by another allocation, and unpermitted discharges within the geographic boundaries of stormwater runoff management agencies including, but not limited to, Caltrans roadway and non-roadway facilities and rights-of-way, atmospheric deposition, public facilities, properties proximate to stream banks, industrial facilities, and construction sites.

Requirements in each NPDES permit issued or reissued shall be based on an updated assessment of best management practices and control measures intended to reduce PCBs in urban stormwater runoff. Control measures implemented by stormwater runoff management agencies and other entities ... shall reduce PCBs in stormwater runoff to the maximum extent practicable....

In the first five-year permit term, stormwater Permittees will be required to implement control measures on a pilot scale to determine their effectiveness and technical feasibility. In the second permit term, stormwater Permittees will be required to implement effective control measures, that will not cause significant adverse environmental impacts, in strategic locations, and to develop a plan to fully implement control measures that will result in attainment of allocations, including an analysis of costs, efficiency of control measures and an identification of any significant environmental impacts. Subsequent permits will include requirements and a schedule to implement technically feasible, effective and cost efficient control measures to attain allocations. If, as a consequence, allocations cannot be attained, the Water Board will take action to review and revise the allocations and these implementation requirements as part of adaptive implementation.

In addition, stormwater Permittees will be required to develop and implement a monitoring system to quantify PCBs urban stormwater runoff loads and the

load reductions achieved through treatment, source control and other actions; support actions to reduce the health risks of people who consume PCBs-contaminated San Francisco Bay fish; and conduct or cause to be conducted monitoring, and studies to fill critical data needs identified in the adaptive implementation section.”

- C.12-3** Urban runoff management agencies have a responsibility to oversee various discharges within the agencies’ geographic boundaries. However, if it is determined that a source is substantially contributing to PCBs loads to the Bay or is outside the jurisdiction or authority of an agency, the Water Board will consider a request from an urban runoff management agency that may include an allocation, load reduction, and/or other regulatory requirements for the source in question. If these sources are contributing to urban runoff loads (as opposed to direct Bay discharge), load reductions from these sources will count toward meeting the urban runoff wasteload allocations.
- C.12-4** Some PCB congeners have dioxin-like properties. Dioxins are persistent, bioaccumulative, toxic compounds that are produced from the combustion of organic materials in the presence of chlorine. Dioxins enter the air through fuel and waste emissions, including diesel and other motor vehicle exhaust fumes and trash incineration, and are carried in rain and contaminate soil. Dioxins bioaccumulate in fat, and most human exposure occurs through the consumption of animal fats, including those from fish. Therefore, the actions targeting PCBs will likely have the simultaneous benefit of addressing a portion of the dioxin impairment resulting from dioxin-like PCBs.
- C.12-5** Recent estimates using the latest available data suggest that the urban runoff PCBs loading to San Francisco Bay is on the order of 19 kg/yr (McKee and Yee 2015). While this figure is based on environmental data and thus has inherent uncertainty associated with it, it agrees very well with the regional urban runoff load estimate of 20 kg/yr provided in the TMDL report.
- C.12-6** Studies suggest that PCBs load reductions of approximately 6 kg/yr are possible by 2030 through control measures like street sweeping, control of PCBs during building demolition and renovation, drop inlet cleaning, treatment retrofits, redevelopment of contaminated areas, pump station diversion, and street flushing (McKee and Yee 2015). While there are substantial uncertainties associated with these estimates, these results suggest that a substantial portion of the additional load reductions (~ 12 kg/yr) necessary to achieve the PCBs TMDL may need to come from identification and cleanup of PCBs-contaminated properties.
- C.12-7** The distribution of PCBs in the urban landscape is much more variable than it is for mercury. For example, data indicate that PCBs-contaminated land uses yield perhaps 800 times more PCBs per unit area compared to the least contaminated land uses. By contrast, there is a 70-fold difference between the highest and lowest yielding land uses for mercury (McKee and Yee 2015). A large proportion (about 53 percent) of annual average urban runoff PCB loading is

likely coming from old industrial or other contaminated areas (McKee and Yee 2015).

- C.12-8** A significant recent accomplishment of the Sources, Pathways, and Loadings workgroup of the Regional Monitoring Program has been the development and refinement of a regional watershed spreadsheet model (RWSM). This GIS-based model estimates relative land use and source area yields, and integrates them to provide a transparent, mutually accepted, and peer-reviewed analysis of relative watershed scale yield. Outputs from model runs to date suggest yields for the most polluted watershed in excess of 1000 g/km² for PCBs and mercury and a variation between watersheds of ~100,000-fold for PCBs and ~200-fold for mercury. To date, modeling results have a large amount of uncertainty in terms of absolute magnitude, but the results are capturing the patterns of contaminant distribution and transport. The model output is generally consistent with what is known about the distribution of these contaminants in the landscape from stormwater and bedded sediment data. The results are also consistent with what monitoring data tell us about the relative mercury and PCBs loads from land use and source area categories. The predictive power of this modeling tool will be improved as more data are available to characterize PCBs and mercury concentrations in the watersheds and will be useful in predicting regional and sub-regional scale loads of PCBs and other contaminants under a variety of management scenarios (McKee and Yee 2015).
- C.12-9** Sufficient information is available to establish default factors for PCBs load reduction credit resulting from foreseeable control measures implemented during this permit term (see information under C.12.b below). For treatment controls, the estimated load reductions can be calculated by multiplying the assumed land-use PCB yearly mass yield by the treated area and by a treatment efficiency factor. The load reduction resulting from cleaning up contaminated properties can be estimated by recognizing that the yield of the contaminated property will be reduced to an assumed background level over the course of site cleanup. The load reduction resulting from controlling PCBs in building materials during demolition can be estimated by estimating the amount of PCBs in the building, the fraction of those PCBs that would enter the storm drain system in the absence of controls, and the efficiency of control measures applied to the demolished building to prevent such PCBs release.
- C.12-10** Limited sampling data from Bay Area structures built between 1950 and 1980 suggest that PCB concentrations in caulks here are similar to those in other parts of North America and Europe. Samples collected in about 1350 buildings in Switzerland constructed between 1950 and 1980 found almost half the buildings contained PCBs in caulk, with most samples containing >100 ppm and 20 percent containing 10,000 ppm or more. In Bay Area samples, 40 percent contained > 50 ppm PCBs and 20% contained > 10,000 ppm PCBs. The study estimates that certain types of Bay Area structures built 1950-1980 contain a mid-range average of 4.7 kg PCBs per building. An estimated 6300 currently standing non-residential buildings in the MRP area were built between

1954 and 1974. The mid-range estimate of the total PCB mass in caulk in these buildings is 10,500 kg⁶⁴.

C.12-11 Currently there are no protocols for identifying PCBs-containing structures at the time of demolition so that PCBs do not enter municipal storm drains. Some demolition sites, especially high-profile sites such as hospitals, bridges and sports arenas, comply with federal law (Toxic Substances Control Act) and State regulations (California Code of Regulations Title 22) that require a project proponent to determine the presence of PCBs and other hazardous substances and to follow applicable disposal requirements. Soil sampling data from such demolition projects indicate that significant concentrations of PCBs can be present in site soils. Such PCB-laden sediment, particularly at a demolition site without adequate controls, is transported by vehicle tracking, wind erosion or precipitation runoff to the storm drain. PCBs entering the storm drain system during dry weather are non-stormwater discharges that must be effectively prohibited pursuant to CWA § 402(p)(3)(B)(ii). PCBs that are discharged into storm drain systems and waters of the U.S. through stormwater runoff are appropriate for control in order to make progress in achieving the PCBs TMDL wasteload allocations for urban runoff, pursuant to CWA § 402(p)(3)(B)(iii).

C.12-12 U.S. EPA has developed guidelines, available at its [“Steps to Safe Renovation and Abatement of Buildings That Have PCB-Containing Caulk”](#) website, for identifying and removing PCBs in building materials that can help in the effort to manage PCBs so that they do not enter municipal storm drains. In addition, during the Previous Permit term, starting in 2009, the Permittees participated in the grant-funded “PCBs in Caulk Project”⁶⁴, which addressed potential impacts of PCBs released into stormwater runoff during demolition or remodeling projects in the San Francisco Bay Area. This project fulfilled the permit requirement to investigate the costs, effectiveness, and technical feasibility of PCBs control measures to minimize the release of PCBs in caulks and sealants to stormwater runoff during demolition or remodeling projects. Products developed through this grant-funded project include a fact sheet for developers; a fact sheet on sampling methods; BMPs to control PCBs in caulk at demolition or renovation sites; a Model Implementation Process to incorporate a requirement to use BMPs into the municipal demolition permitting process; a training strategy to train and deploy municipal staff, such as hazardous material or building inspectors, to ensure proper implementation of BMPs; and a technical memorandum on relevant regulations and policies.

C.12-13 This provision is consistent with a recent U.S. EPA memorandum⁶⁵ providing guidance on implementing TMDL WLAs in NPDES stormwater permits.

⁶⁴ Klosterhaus S. and McKee L. et al. 2014. *Polychlorinated Biphenyls in the exterior caulk of San Francisco Bay Area buildings, California, USA*. Environment International 66 (2014) 38–43.

⁶⁵ U.S. EPA. November 26, 2014. Revisions to the November 22, 2002 Memorandum “Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs.”

Specifically, this provision establishes clear and concrete milestones and deadlines (see C.12.a.iii) for the achievement of specific PCBs load reductions as well as other requirements (see C.12.b-h.), necessary to achieve receiving water limits of this permit term relative to the PCBs TMDL WLAs.

Specific Provision C.12 Requirements

Provision C.12.a. requires Permittees to implement control measures to achieve specific PCBs load reductions. In order to comply with this requirement, Permittees must identify the PCBs control measures and the watersheds and management areas in which these measures will be implemented and a time schedule for implementation.

In the first year, the Permittees have to identify watersheds and management areas and control measures sufficient to achieve the near term load reduction performance criterion (0.5 kg/yr by June 30, 2018). In subsequent years, the Permittees have to report annually any new watersheds and management areas and control measures necessary to achieve the ultimate PCB load reduction performance criterion (3 kg/yr) by June 30, 2020.

Moreover, Permittees must quantitatively demonstrate the load reductions achieved through use of the load reduction accounting scheme described below and/or further developed through the actions required under C.12.b. This provision element is critical to the successful implementation of the urban runoff requirements of the PCBs TMDL. The accountability mechanism for control measure implementation consists of three parts: 1) the identification of control measures and associated watersheds, 2) a commitment to an implementation schedule, and 3) the quantification of load reductions resulting from control measure implementation.

This provision requires that Permittees achieve annual PCBs load reductions totaling 0.5 kg/yr by June 30, 2018, and 3.0 kg/yr by June 30, 2020. These load reductions are achievable with the associated deadlines and are based on an assessment of BMPs and control measures controls to reduce PCBs as further described below.

The PCBs load reductions achieved through implementation of Provision C.12.a can be estimated for a unit of activity for a number of anticipated control measures. The effectiveness and benefits of control measures remain uncertain because of limited implementation experience and relatively scarce data on control measure effectiveness for a range of conditions. However, there are sufficient data to develop a starting point for a reasonable system of estimating load reductions as a function of the scale and intensity of control measure implementation.

A simple approach for estimating the load reductions associated with certain control measures involves use of a land-use pollutant yield. A land-use yield is an estimate of the mass of a contaminant contributed by an area of a particular land-use per unit time. Essentially, different types of land uses yield different amounts of pollutants because land use types differ in their degree of contamination resulting from differing intensities of historical or ongoing use of pollutants in those land uses. PCBs were more heavily used in older industrial areas so older industrial land use areas yield a much higher mass of PCBs per unit area than newer urban land use areas where PCBs were never intensively used.

Permittees submitted land-use mass yields of PCBs in their 2014 Integrated Monitoring Report. When these yields were multiplied by the total area of various land-use categories, the estimated region-wide (the entire region that discharges to the Bay) PCBs load was lower than the load estimated in the PCBs TMDL by approximately a factor of 1.73. Therefore, the land-use yields were multiplied by a factor of 1.73 in order to normalize to the estimated baseline PCBs load in the PCBs TMDL and to agree with recent load estimates from runoff. The resultant (adjusted) mass yields for three land-use types shown below are based on data Permittees collected during the Previous Permit term and provide a reasonable means of establishing the PCBs load reductions for control measures implemented in corresponding areas⁶⁶. Permittees may refine these yields when they submit supporting documentation in their 2016 Annual Report.

- Old Industrial Land Use = 86.5 mg PCBs/acre/year
- Old Urban Land Use = 30.3 mg PCBs/acre/year
- New Urban areas and Other = 3.5 mg PCBs/acre/year
- Open Space = 4.3 mg/acre/year

The land-use yield provides a convenient way to estimate the load reduction of various sorts of control measure strategies. For example, when contaminated areas are **newly or redeveloped**, the pollutant yield of the area will be reduced through a variety of mechanisms (i.e., removal, capping, paving of contaminated sediment). So, the amount of PCBs load reduction can be obtained by multiplying the area of new/redevelopment by the difference in yield (either old industrial minus new urban or old urban minus new urban, whichever pre-development land-use is applicable).

The PCBs load reductions for **retrofits or other treatment controls** (including green infrastructure) can be calculated by multiplying the area treated by the assumed land-use yield of the treated area multiplied by the efficiency factor of the treatment method (using a default value of 70 percent or an efficiency established through documentation of implemented method and reported in annual reports).

For **contaminated private properties** that are referred to the Water Board or other agencies for subsequent remediation, the estimated load reduction can be derived by assuming that the PCBs yield of the source area is reduced over the course of site cleanup. Source areas identified for the purpose of referral tend to have much higher areal yields, based on an analysis of the Ettie Street pump station watershed in Oakland. Information adapted from the IMR suggests that 3975 mg PCBs/acre/year is a reasonable interim estimate for the yield of such contaminated sites (Geosyntec 2015). The cleanups will be assumed to take ten years from the date of referral to the Water Board. The assumed result of the cleanup is that the PCBs yield will be reduced over the course of ten years from 3975 mg PCBs/acre/year to the old urban yield of 30.3 mg PCBs/acre/year, or a reduction of 3940 mg PCBs/acre/yr.

Fifty percent of this load reduction will be credited during this Permit term for properties that are referred to the Water Board during the first three years of the Permit term and for which Permittees implement enhanced operation and maintenance measures in the vicinity of the referred property. Often, contaminated properties have a “halo” of

⁶⁶ *PCBs Yield Coefficients for MRP 2.0*. Geosyntec Consultants. September 23, 2015.

contamination, and contaminated sediments in this halo can be transported to receiving waters through the stormwater conveyance system. Further, pollutants from the source area may continue to be transported offsite while remediation occurs. Therefore, enhancing operation and maintenance measures in areas immediately adjacent to the source area while the source property is being remediated is a priority to prevent PCBs transport to receiving waters. If enhanced maintenance measures are not implemented in the immediate vicinity of the referred property, the calculated load reduction will be recognized upon completion of the cleanup project.

PCBs load reductions resulting from implementing control measures to prevent discharge to storm drains of **PCBs in building materials during demolition** will be computed as: the mass of PCBs contained in applicable buildings⁶⁷ multiplied by the fraction of PCBs entering stormwater conveyances in the absence of controls multiplied by the effectiveness of controls preventing PCBs from entering stormwater conveyances. Each term in this calculation can be represented by a range of values, and information is limited on some of these terms (particularly the fraction of PCBs entering storm drains). However, reasonable values, derived from information available from Klosterhaus (2011) are:

- Mass of PCBs per building = 5 kg
- Number of regulated buildings demolished = 50
- Average fraction of PCBs that enters MS4s during demolition without controls = 1 percent
- Average effectiveness of controls at preventing PCBs from entering storm drains = 80 percent

Multiplying these parameters suggests that about 2 kg/yr of PCBs loads can be reduced by effectively controlling PCBs during demolition. The actual number of demolitions will vary, but 2 kg represents a reasonable estimate and is the basis for establishing the yearly load reduction credit for controlling the release of PCBs to storm drains from such demolitions. If a Permittee implements a control program consistent with these assumptions, a share of the 2 kg/yr credit, pro-rated by population, will be allocated to that Permittee. Permittees may propose an alternative means (other than population-based) of allocating the permit-area-wide load reduction credit associated with implementing C.12.f with the 2019 Annual Report.

Permittees will also likely employ **enhanced operation and maintenance control measures** to reduce loads of mercury and PCBs. These strategies include: street sweeping, drain inlet cleaning, pump station maintenance, PCBs captured by full trash capture devices, etc. It is not possible to state, in advance, specific parameters to allow for load reduction estimates. However, the load reduction calculation is straightforward. The pollutant load reduction (either baseline or enhanced) is the product of the volume of material collected by the control measure multiplied by the percent of the collected material that is sediment multiplied by the density of that sediment multiplied by the concentration of the pollutant in that sediment. The load reduction credit is then simply

⁶⁷ Applicable buildings include buildings (excluding single family residential and wood frame buildings) constructed from 1950 through 1980 with PCBs concentration in caulks/sealants greater than 50 ppm.

the difference between the load reductions achieved with enhanced effort and those achieved with a baseline level of effort (which may be zero if the control measure is new rather than an increased intensity of an existing measure).

PCBs load reduction from other activities can be similarly established and documented through quantification of the amount of material (e.g., sediment or water or other waste) prevented from entering receiving waters multiplied by the concentration of PCBs in that material. The load reduction calculated for all implemented measures shall be summed and compared to the load reduction requirements in Tables 12.1 and 12.2. Permittees can demonstrate compliance with the load reduction requirements by summing the load reduction assigned to each type of activity they undertake. For example, if Permittees meet the Permit requirements for demolitions of regulated buildings (C.12.f) designed to achieve the control effectiveness consistent with the calculation outlined above, then a permit-area-wide load reduction of 2 kg/yr will be applied to the 3 kg/yr by the June 30, 2020, load reduction requirement. Further, Permittees would account for the area treated by green infrastructure, apply the appropriate land use PCB yield, and sum the load reduction over all such treatment installations. Similarly, the calculated load reduction resulting from property referrals and enhanced operation and maintenance can be accounted for using the approach described previously. Summing up all PCBs load reductions from all relevant control measures would constitute the permit-area-wide PCBs load reduction, county-specific, or Permittee-specific PCBs load reduction. Permittees, as a group, are encouraged to implement PCBs controls in the locations with the greatest opportunities for load reduction and be held accountable as a group. However, if the overall load reduction criteria (for all Permittees combined) are not met, the Permit provides an accountability mechanism in the form of load reduction performance criteria for each county in the permit area, calculated according to the proportions used to establish county-specific load allocations in the PCBs TMDL. For example, the load allocation for all Permittees within Alameda County in the PCBs TMDL is 0.5 kg/yr. The estimated baseline load according to the TMDL is 5 kg/yr. This represents achieving a load reduction over 20 years of 4.5 kg/yr (of the 18 kg/yr reduction from urban runoff sources to the Bay overall). However, the Permittees' jurisdictions have an estimated total load reduction responsibility of 14.4 kg/yr, because some of the urban runoff load comes from areas not under the Permittees' jurisdiction. Therefore, the Permittees within Alameda County are responsible for 4.5/14.4 (~ 31.25 %) of the load reductions from the permit area. Applying this same fraction to the required 3,000 g/yr load reduction results in a load reduction for the Alameda County Permittees of 940 g/yr. The load reduction for other counties (e.g., all Contra Costa Permittees combined, all Santa Clara Permittees combined, all San Mateo Permittees combined, and Solano Permittees [Suisun City, Vallejo, Fairfield] combined) can be derived similarly by subtracting the TMDL load allocations from the baseline load estimates and then dividing by 14.4 and then multiplying by either 500 g/yr (for the June 30, 2018, load reductions) or 3,000 g/yr (for the June 30, 2020, load reductions).

Load reduction opportunities almost certainly vary by jurisdiction. Some jurisdictions (e.g., those with a higher proportion of old industrial land use) may have more PCBs-contaminated sites and, hence, greater potential opportunities to implement control measures to reduce loads. Further, the total PCBs load reduction across the entire area

covered under this Permit is relevant to the recovery of San Francisco Bay. Therefore, as long as the total load reductions (500 g/yr by June 30, 2018, and 3 kg/yr by June 30, 2020) are achieved, the load reduction distribution among the counties is much less of a concern.

However, if the permit-area-wide total load reduction performance criteria are not achieved, the Permittees in counties meeting the county-level load reduction criteria in the Permit will be deemed in compliance with the performance criteria. If both the permit-area-wide total load reduction criterion and county-specific load reduction criterion are not achieved, those Permittees will be deemed in compliance if they have achieved load reductions consistent with their proportion of the county total established under C.12.b.iii(1). Allocation of the county-wide load reduction responsibility to individual Permittees is based on the fraction of county population in each Permittees' municipality. This is consistent with the assumptions and requirements of the PCBs TMDL in that the permit-area-wide load allocation was distributed to each county based on the proportion of permit-area-wide population contained in each county. Other methods could be used to distribute the county-wide PCBs load reduction performance criteria to individual municipalities (e.g., proportion of county total of certain land-uses associated with PCB presence contained in each municipality). Permittees may propose another alternative as part of reporting on C.12.b.iii(2).

Provision C.12.b. requires Permittees to develop and implement an assessment methodology and data collection program to quantify PCBs loads reduced through implementation of any and all pollution prevention, source control and treatment control efforts required by the provisions of this Permit or load reductions achieved through other relevant efforts not explicitly required by the provisions of this Permit. The default approach for establishing load reductions for various implementation activities is described above. Early in the Permit term (2016), Permittees will submit documentation supporting this default approach for load reduction accounting along with a description of the data to be collected to establish load reduction value. In particular, C.11/12.b.iii(1) requires Permittees to submit specific details showing how they will perform the calculations to account for mercury and PCBs load reductions from all types of control measures for the reduction of these pollutants. This information includes what data will be used to assign treated areas; how to assign land use to select a yield; and how material will be sampled to determine the contaminant concentration (for control measures requiring such information). Permittees should also identify the types of supporting information that will be submitted so that the calculations can be reproduced. As Permittees gain implementation experience and collect information on this implementation, they may request refinement of the accounting system for use in subsequent Permit terms.

Permittees are encouraged to build on the framework developed in response to a Previous Permit requirement and submitted by Permittees in January 2014 in their Integrated Monitoring Report. This could include updating and in some cases extending the framework presented in that document, justifying assumptions and selected parameters used for each type of control measure, and indicating what information will be collected and submitted to calculate the load reduction for each implemented control measure. The accounting scheme for use in this Permit term and summarized above along with the

refined accounting scheme submitted near the end of the permit term (for use in subsequent Permits) must both be submitted for Executive Officer approval.

Many of the legacy sources of PCBs are found in Bay margins contaminated by historical industrial activity. These legacy sources may be contributing to storm drain runoff conveyances, but Permittees may have jurisdictional challenges in addressing the sources in private property. In addition, Permittees are responsible for contamination in public rights of way. Permittees are expected to make diligent efforts both to address contamination on public property and to refer source properties to the Water Board for possible cleanup and abatement.

Provision C.12.c. requires Permittees to implement green infrastructure projects during the term of the Permit to achieve PCBs load reductions of 120 g/year by June 30, 2020. The county-specific responsibilities for this load reduction are shown in Table 12.2 of the Permit. These county-specific green infrastructure load reduction requirements were derived using the same methodology described above for Provision C.12.a.

Some Bay Area drainages contain notably elevated PCBs concentrations in suspended or bedded sediment (e.g., > 500 ppb in bedded sediment). A recent analysis of soil PCBs and mercury data collected in the Bay Area identifies 15 sites where maximum concentrations exceed 3.8 mg/kg for PCBs and 1.6 mg/kg for total mercury. Areas with moderately high PCBs concentrations (e.g., 100-500 ppb) were found throughout areas where historical industrial activity involved use of PCBs (McKee and Yee 2015). Placing green infrastructure in highly- and moderately-contaminated areas will form an important element in achieving the PCBs TMDL-required load reductions. However, green infrastructure implementation is a long-term proposition and there is value in placing green infrastructure across the broader landscape to intercept PCBs before they are discharged to receiving water.

To ensure that Bay Area municipalities are working effectively and expeditiously in implementing appropriate green infrastructure controls to reduce loads of mercury, PCBs, and other pollutants of concern, the Permit requires Permittees to prepare a reasonable assurance analysis that rigorously and quantitatively demonstrates PCBs load reductions of at least 3 kg/yr throughout the permit area will be achieved by 2040 through implementation of green infrastructure throughout the permit area. The effort to prepare a reasonable assurance analysis is described above under C.11.c.

Provision C.12.d. requires Permittees to prepare a plan and schedule for PCBs control measure implementation and corresponding reasonable assurance analysis to quantitatively demonstrate that sufficient control measures will be implemented to attain the PCBs TMDL wasteload allocations. The Permit requires that this plan must: identify all technically and economically feasible PCBs control measures (including green infrastructure projects) to be implemented; include a schedule according to which these technically and economically feasible control measures will be fully implemented; and provide an evaluation and quantification of the PCBs load reduction of such measures as well as an evaluation of costs, control measure efficiency, and significant environmental impacts resulting from their implementation:

The PCBs TMDL anticipated the challenge of achieving the urban runoff load reductions required to meet the TMDL allocations within the twenty-year implementation time frame. The TMDL implementation plan states that

“... achievement of the allocations for stormwater runoff, which is projected to take 20 years, will be challenging. Consequently, the Water Board will consider modifying the schedule for achievement of the load allocations for stormwater runoff provided that dischargers have complied with all applicable permit requirements and accomplished all of the following:

- A diligent effort has been made to quantify PCBs loads and the sources of PCBs in the discharge;*
- Documentation has been prepared that demonstrates that all technically and economically feasible and cost-effective control measures recognized by the Water Board have been fully implemented, and evaluates and quantifies the PCBs load reduction of such measures;*
- A demonstration has been made that achievement of the allocation will require more than the remaining 10 years originally envisioned; and*
- A plan has been prepared that includes a schedule for evaluating the effectiveness and feasibility of additional control measures and implementing additional controls as appropriate.”*

Provision C.12.d provides the opportunity for Permittees to describe the full suite of actions that will be required to achieve the TMDL along with realistic timelines for this achievement. The load reductions for PCBs are difficult and time-consuming to achieve because of the distribution of sources in the landscape; challenges associated with finding and reducing these existing sources; and unpredictability related to demolition of PCBs containing structures. Further, some part of the expected PCB load reduction will come from long-term implementation of control strategies (like green infrastructure) that extend beyond the current implementation timeframe of the TMDL. The long-term plan and schedule required by this provision will help lay the foundation for an implementation timeframe that is longer than that stated in the TMDL.

Provision C.12.e. requires that Permittees collect samples of caulk and other sealants used in storm drains and between concrete curbs and street pavement and investigate whether PCBs are present in such material and in what concentrations. PCBs are most likely present in material applied during the 1970s, so the focus of the investigations should be on structures installed during this era. The Washington Department of Ecology discovered that PCBs-containing caulk (sealant) was used inside the City of Tacoma’s storm drains during a 1970s repair. There is reason to believe that such use was not isolated to this one location. The sampling and analysis required by this Provision C.12 element will count toward partial fulfillment of the monitoring effort aimed at finding PCBs sources (see management information need in C.8.f).

Provision C.12.f. requires Permittees to develop a protocol for controlling PCBs during building demolition so that PCBs are not transmitted to storm drains via vehicle trackout, airborne releases, soil erosion or stormwater runoff during or after demolition. Because this is a new management practice, three years are allotted to working with entities, such as the Bay Air Quality Management District, U.S. EPA, and waste management entities,

to coordinate oversight functions and otherwise develop a coordinated protocol. After the development period, Permittees shall implement the protocol such that PCBs are controlled during the demolition of applicable structures so that they do not enter municipal storm drains. During this Permit term, applicable structures are limited to potential PCB-containing industrial, public, and commercial structures. Single-family residential and wood frame structures are excluded. In future permits, other types of structures and renovations may be included in the protocol.

The Integrated Monitoring Report (IMR)⁶⁸ presents estimates of the mass of PCBs per building (constructed or renovated prior to 1979) ranging from 0.6-16 kg and contribution to stormwater ranging from 0.8 to 4000 grams/year. This is one of the largest known sources of PCBs, although it is distributed throughout the region. For a building with 4.7 kg of PCBs and current control measures of medium effectiveness, there may be 280 grams of PCBs released to stormwater during demolition, assuming control measures are only moderately effective. If only control measures of low effectiveness were in place, such a building would release 560 grams PCBs during demolition.

Permittee 2014 Annual Reports, New and Redevelopment Section “Projects Approved” tables (C.3.b.v.(1)) provided a means to gauge the potential number of redevelopment projects involving applicable structures. While these tables are not required to list all the information necessary to determine if applicable structures will be demolished during redevelopment, in some cases enough information is provided. In 6 of the 11 Permittees reviewed, potential PCB-containing structures are planned to be demolished, including one project in which 14 buildings likely built between 1950 and 1980 will be demolished.

Water Board staff also contacted Bay Area waste management entities, such as county recycling and construction debris recovery programs. Brief discussions revealed the following:

- In general, demolition project proponents must submit debris recovery plans to these entities prior to commencing demolition. These plans could be modified to include information on the likelihood and/or actual existence of PCB-containing materials in the structure.
- Waste management entities tend to have technical advisory committees that could advise on appropriate approaches/frameworks for controlling PCBs during demolition so that they do not enter storm drains.
- Applicable structures are a small subset of all demolitions in the Bay Area.
- Some cities use software for recording demolition projects that could be modified by adding a form(s) for applicable structures.
- There are a limited number (approximately 30-40) of construction and debris processing facilities in the Bay Area, and they are listed on county web sites. At least two of these facilities are known PCB-containing sites, although both include metal processing facilities in addition to other debris recycling.
- One waste management entity has produced a video documenting a large-scale demolition project at a former Army Base that had a variety of hazardous

⁶⁸ Integrated Monitoring Report Part B: PCB and Mercury Loads Avoided and Reduced via Stormwater (IMR). Prepared by Geosyntec Consultants for the Bay Area Stormwater Management Agencies Association. 2013.

materials to dispose of, including PCBs. Another pointed to You-Tube videos showing how to remove PCB-containing caulk prior to demolition.

These facts (see also C.10, C.11 and C.12 above) indicate that a workable protocol for controlling PCBs during demolition so that they do not enter storm drain systems could be built upon existing demolition requirements and utilize existing information resources.

Some municipalities may have no applicable structures (i.e., the only structures that existed pre-1980 were single-family residential or wood-frame structures). Such Permittees may provide documentation acceptable to the Executive Officer in their 2017 Annual Reports to seek exemption from the requirement to develop a PCBs demolition control program. This allows time for compilation of this documentation, such as historic maps or other historic records, and for determining which Permittees are exempt prior to year the July 1, 2019, requirement to begin implementing the protocols.

Provision C.12.g. There are still uncertainties surrounding the magnitude and nature of PCBs reaching the Bay in urban runoff and the ultimate fate of such PCBs, including biological uptake. Provision C.12.g requires that Permittees ensure that fate and transport studies of PCBs in urban runoff are completed. The specific information needs include understanding the in-Bay transport of PCBs discharged in urban runoff, the sediment and food web PCBs concentrations in margin areas receiving urban runoff, the influence of urban runoff on the patterns of food web PCBs accumulation, especially in Bay margins, and the identification of drainages where urban runoff PCBs are particularly important in food web accumulation.

Provision C.12.h. requires actions that manage human health risk due to mercury and PCBs. These may include efforts to communicate the health risks of eating Bay fish and other efforts aimed at high risk-communities such as subsistence fishers and their families. The risk reduction framework developed in the Previous Permit term, which funded community-based organizations to develop and deliver appropriate communications to appropriately targeted individuals and communities, is an appropriate approach.

C.13. Copper Controls

Chronic and acute site-specific objectives (SSOs) for dissolved copper have been established in all segments of San Francisco Bay. The plan to implement the SSOs and ensure the achievement and ongoing maintenance of the SSOs in the entire Bay includes three types of actions for urban runoff management agencies. These actions are implemented through this Permit as provisions to control urban runoff sources of copper.

The control measures for urban runoff target significant sources of copper identified in a report produced in 2004 for the Clean Estuary Partnership.⁶⁹ This report updated information on sources of copper in urban runoff, loading estimates and associated level of uncertainty, and summarized feasible control measures and priorities for further investigation. Accordingly, the Permit provisions target major sources of copper including architectural copper, copper pesticides, and industrial copper use.

Fact Sheet Findings in Support of Provision C.13.

- C.13-1** Urban runoff is a conveyance mechanism by which copper reaches San Francisco Bay.
- C.13-2** Copper has the reasonable potential to cause or contribute to exceedances of copper water quality standards in San Francisco Bay.
- C.13-3** SSOs for dissolved copper have been adopted for all segments of San Francisco Bay.
- C.13-4** The Permit requirements to control copper to the MEP are necessary to implement and support ongoing achievement of the SSOs.
- C.13-5** One of the major sources of copper to urban runoff has been addressed through passage of Senate Bill 346 in 2010, which requires brake pad manufacturers to reduce the use of copper in brake pads sold in California to no more than 5% by weight by 2021, and no more than 0.5% by 2025. The law also provides an objective process to ensure that any new brake materials meet all applicable safety and performance standards. To make sure that new materials will not cause future environmental problems, the law requires brake manufacturers to screen potential alternatives for their impacts on human health and the environment using the Toxic Information Clearinghouse, and to select less hazardous options.
- C.13-6** A scientific uncertainty regarding sediment toxicity was identified during the development of SSOs for copper. Bay sediment copper concentrations are somewhat elevated above the natural background (from native soils). Local soils contain 30- 35 ppm (DW, dry weight) based on deep (> 2 meter) sediment core results for SF Bay. The copper ERL (effects range low) is 34 ppm (DW)

⁶⁹ TDC (TDC Environmental), 2004. *Copper Sources in Urban Runoff and Shoreline Activities*. Prepared for the Clean Estuary Partnership.

and the ERM (effect range median) is 240 ppm (DW). Thus, the natural concentration of local soils is very close to the ERL. There has never been an exceedance of the ERM in the 975 samples collected and analyzed through-RMP data. The maximum copper sediment concentration ever recorded in RMP samples (94 ppm DW) is well below the LC50 of the amphipod *Eohaustorius estaurius* (534 ppm) or the amphipod crustacean *Hyalella azteca* (260 ppm). Surface sediment copper concentrations have trended lower over the last 20 years according to monitoring in the Bay. The median surface concentration of copper was 40 ppm (DW) during the period 1993-2004 and dropped to 38 ppm in 2005-2014. This reduced concentration occurred despite significant population increases in the Bay Area and despite the fact that much more sampling effort was conducted in the shallower parts of the Bay (where copper concentrations would be expected to be higher due to human activities and urban sources) during the latter period because of a re-design of RMP sampling strategies. There was some evidence of possible copper-related toxicity in the late 1990s, but there has not been additional evidence of this phenomenon. The possible sediment toxicity occurred in the northern portions of San Francisco Bay (Suisun Bay and San Pablo Bay) where sediment copper concentrations are higher. However, the decrease in median sediment copper concentrations in the northern estuary from the time period 1993-2004 (52 ppm DW) to 2005-2014 (45 ppm DW) has been even more pronounced than the reduction for the Bay as a whole. Because there has not been additional evidence of copper sediment toxicity and copper concentrations in surface sediments appear to be decreasing over time, Permit requirements to further investigate copper sediment toxicity in San Francisco Bay were satisfied by information collected under MRP 1.0 and are no longer needed. If more evidence of such toxicity does appear, this requirement may be re-instated.

- C.13-7** A scientific uncertainty regarding the olfactory impairment of salmonids was identified during development of SSOs for copper. Exposure to dissolved copper has been shown to cause olfactory impairment at relatively low concentrations in freshwater fish, resulting in an impaired avoidance response to predators. When the SSOs were established, studies were planned to address whether or not this phenomenon occurred in estuarine water. The studies⁷⁰ were supported in part through requirements in the Previous Permit and were conducted by David Baldwin of NOAA's Northwest Fisheries Science Center. Dr. Baldwin measured the firing of neurons in response to exposure to odorant chemicals. The studies indicate that salmon in saline or moderately saline water are much less sensitive than salmon in freshwater, and that the potential effect of copper on salmon olfaction is not a concern in the Bay.

⁷⁰ David Baldwin, NOAA Fisheries, Northwest Fisheries Science Center, 2015. *Impact of dissolved copper on the olfactory system of juvenile salmon, Phase II: Effect of estuarine salinity on olfactory toxicity.*

Specific Provision C.13. Requirements

Provision C.13.a. Copper is used as an architectural feature in roofs, gutters and downspouts. When these roofs are cleaned with aggressive cleaning solutions, substantial amounts of copper can be liberated. Provision C.13.a for architectural copper involves a variety of strategies ranging from BMPs to prohibition against discharge of these cleaning wastes to the storm drain.

Provision C.13.b. Copper is commonly used as an algaecide in pools, spas, and fountains. Provision C.13.b prohibits discharge to the storm drain of copper-containing wastewater from such amenities.

Provision C.13.c. Some industrial facilities likely use copper or have sources of copper (e.g., plating facilities, metal finishers, and auto dismantlers). This control measure requires municipalities to include these facilities in their inspection program plans.

C.14. Bacteria Controls

The purpose of this provision is to implement the stormwater runoff and dry weather flow (urban runoff) requirements of the San Pedro Creek and Pacifica State Beach Bacteria TMDL (TMDL) and reduce bacteria loads to make substantial progress toward achieving the urban runoff bacteria wasteload allocations established for the TMDL.

Fact Sheet Findings in Support of Provision C.14

- C.14-1** This Permit implements the Basin Plan amendment adopted by the Water Board on November 14, 2012, that establishes a TMDL and an Implementation Plan for bacteria in San Pedro Creek and at Pacifica State Beach. The State Water Board and U.S. EPA have also approved this Basin Plan amendment.
- C.14-2** The implementation plan requires the City of Pacifica and San Mateo County (the Pacifica and San Mateo Permittees) to implement bacteria control measures, conduct education and outreach to others, and conduct water quality monitoring efforts. Control measures implemented by the Pacifica and San Mateo Permittees shall reduce bacteria in urban runoff to achieve TMDL wasteload allocations.
- C.14-3** The TMDL is allocated to all urban runoff, including urban runoff associated with MS4s and Caltrans facilities. The allocations are expressed in terms of allowable exceedances of single sample bacteria water quality objectives for the water contact recreation beneficial use and shall be achieved by August 2021 for Pacifica State Beach and August 2028 for San Pedro Creek.
- C.14-4** The Pacifica and San Mateo Permittees may comply with any requirement of this provision through a collaborative effort.

Specific Provision C.14 Requirements

Provision C.14.a. requires the Pacifica and San Mateo Permittees to implement various control measures and education and outreach activities to achieve bacteria load reductions. In order to comply with this requirement, the Pacifica and San Mateo Permittees must implement measures such as: effectively prohibit potential illicit discharges to the storm drain from the sanitary sewer collection system; address bacteria discharges from existing and future commercial horse facilities; install dog waste-clean-up signs, waste bag dispensers, and trash receptacles at high priority areas; develop and implement a visual inspection and clean-up plan for high dog waste accumulation areas; and develop and implement an enhanced public outreach and education campaign for managing pet waste. This provision also requires the Pacifica and San Mateo Permittees to modify or refocus control measure implementation efforts as appropriate.

This provision is critical to the successful implementation of the urban runoff requirements for the TMDL. The accountability mechanism for control measure implementation consists of three parts: 1) the identification of control measures and associated watersheds or locations, 2) a commitment to an implementation schedule, and 3) the quantification of the benefit resulting from control measure implementation.

Provision C.14.b. requires the Pacifica and San Mateo Permittees to conduct a water quality monitoring program to assess attainment of wasteload allocations. The monitoring and reporting requirements of Provision C.14 are authorized under Clean Water Act § 308, 40 C.F.R. §§ 122.26(d)(2), 122.41(h),(j) and (l), 122.42(c), 122.44(i) and 122.48, and Water Code § 13383. In order to comply with this requirement, the Pacifica and San Mateo Permittees are required to monitor bacteria levels in San Pedro Creek and at Pacifica State Beach and analyze, summarize, and report the results of the monitoring to the Water Board. Further, they must provide an annual report of the quantitative analysis of trends in bacteria densities and exceedances of applicable water quality objectives. This provision is necessary to determine whether or not wasteload allocations are being attained, so additional or enhanced measures are implemented, if necessary.

Provision C.14.c. requires the Pacifica and San Mateo Permittees to conduct a water quality monitoring program to 1) better characterize bacteria sources and 2) evaluate the effectiveness of the bacteria control measures. The results of the monitoring shall be reported to the Water Board on an annual basis. The findings from these assessments will be used throughout this and future Permit terms to revise, refocus, and enhance bacteria control measures to make them as effective and efficient as possible. Future permits will be based on an updated assessment of bacteria sources and control measure effectiveness. This provision is necessary to allow the Pacifica and San Mateo Permittees to identify and implement effective BMPs in an efficient manner.

C.15. Exempted and Conditionally Exempted Discharges

Legal Authority

Broad Legal Authority: CWA section 402(p)(3)(B)(ii-iii), CWC sections 13377 and 13263, 40 CFR 122.26(d)(2)(i)(B, C, D, E, and F), and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B) requires MS4 operators “to detect and remove (or require the discharger to the municipal separate storm sewer to obtain a separate NPDES permit for) illicit discharges and improper disposal into the storm sewer.”

Federal NPDES regulation 40 CFR 122.26(d)(2)(iv)(B)(1) provides that the Permittees shall prevent all types of illicit discharges into the MS4 except for certain non-stormwater discharges. Illicit discharge means “any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities” (40 CFR 122.26(b)(2)).

Fact Sheet Findings in Support of Provision C.15.

Prohibition A.1. effectively prohibits the discharge of non-stormwater discharges into the storm sewer system. However, certain types of non-stormwater discharges may be exempted from this prohibition if they are unpolluted and do not violate water quality standards. Other types of non-stormwater discharges may be conditionally exempted from Prohibition A.1. if the discharger employs appropriate control measures and BMPs prior to discharge, and monitors and reports on the discharge.

Removal of Conditional Exemption for Planned and Unplanned Discharges of the Potable Water System

The Previous Permit contained requirements for planned and unplanned discharges from the potable water systems owned and/or operated by Permittees who are water purveyors. The discharges were conditionally exempted provided the Permittees complied with the BMP, monitoring, and reporting requirements in the Previous Permit. The requirements were necessary because potable water discharges contain chlorine and chloramines, two very toxic chemicals to aquatic life, and can cause erosion, scouring of stream and creek banks, and sedimentation. The conditional exemption and requirements were included as an interim measure until such time an NPDES permit regulating potable water discharges was adopted. The State Water Board has since adopted the statewide General NPDES Permit for Drinking Water System Discharges to Waters of the United States, Order WQ 2014-0194-DWQ (Potable Water General Permit) on November 18, 2014. Therefore, the conditional exemption and requirements for planned and unplanned discharges from the Permittees’ potable water systems is no longer necessary. The Permittees should seek coverage under the Potable Water General Permit for their potable water system discharges. NPDES-permitted discharges, such as those permitted by the Potable Water General Permit, are exempt from Discharge Prohibition A.1.

Specific Provision C.15. Requirements

Provision C.15.a. Exempted Non-Stormwater Discharges. This section of the Permit identifies the types of non-stormwater discharges that are exempted from Discharge Prohibition A.1. if such discharges are unpolluted and do not violate water quality standards. If any exempted non-stormwater discharge is identified as a source of pollutants to receiving waters, the discharge shall be addressed as a conditionally exempted discharge and must meet the requirements of Provision C.15.b.

Provision C.15.b. Conditionally Exempted Non-Stormwater Discharges. This section of the Permit identifies the types of non-stormwater discharges that are conditionally exempted from Discharge Prohibition A.1. if they are identified by Permittees or the Executive Officer as not being sources of pollutants to receiving waters. To eliminate adverse impacts from such discharges, project proponents shall implement appropriate pollutant control measures and BMPs, and where applicable, shall monitor and report on the discharges in accordance with the requirements specified in Provision C.15.b. The intent of Provision C.15.b.'s requirements is to facilitate Permittees in regulating these non-stormwater discharges to the storm drains since the Permittees have ultimate responsibility for what flows in those storm drains to receiving waters. For all planned discharges, the nature and characteristic of the discharge must be verified prior to the discharge so that effective pollution control measures are implemented, if deemed necessary. Such preventative measures are cheaper by far than post-discharge cleanup efforts.

Provision C.15.b.i.(1). Pumped Groundwater from Non Drinking Water Aquifers. These aquifers tend to be shallower than drinking water aquifers and more subject to contamination. The wells must be purged prior to sample collection. Since wells are purged regularly, this section of the Permit requires twice a year monitoring of these aquifers. Discharges of pumped groundwater from nondrinking water aquifers, which are owned and/or operated by Permittees who pump groundwater as drinking water, are conditionally exempted as long as the discharges meet the requirements in this section of the Permit.

Provision C.15.b.i.(2). Pumped Groundwater, Foundation Drains, and Water from Crawl Space Pumps and Footing Drains. This section of the Permit encourages these types of discharges to be directed to landscaped areas or bioretention units, when feasible. If the discharges cannot be directed to vegetated areas, it requires testing to determine if the discharge is uncontaminated. Uncontaminated discharges shall be treated, if necessary, to meet specified discharge limits for turbidity and pH.

Provision C.15.b.ii. Air Conditioning Condensate. Small air conditioning units are usually operated during the warm weather months. The condensate from these units is uncontaminated and unlikely to reach a storm drain or waters of the State because it tends to be low in volume and tends to evaporate or percolate readily. Therefore, condensate from small air conditioning units should be discharged to landscaped areas or the ground. Commercial and industrial air conditioning units tend to produce year-round continuous flows of condensate. It may be difficult to direct a continuous flow to a landscaped area large enough to accommodate the volume. While the

condensate tends to be uncontaminated, it picks up contaminants on its way to the storm drain and/or waters of the State and can contribute to unnecessary dry weather flows. Therefore, discharges from new commercial and industrial air conditioning units should be discharged to landscaped areas, if they can accommodate the continuous volume, or to the sanitary sewer, with the local sanitary sewer agency's approval. If none of these options are feasible, air conditioning condensate can be directly discharged into the storm drain. If descaling or anti-algal agents are used to treat the air conditioning units, residues from these agents must be properly disposed of.

Provision C.15.b.iii. Emergency Discharges of the Potable Water. Potable water discharges contribute pollution to water quality in receiving waters because they contain chlorine or chloramines, two very toxic chemicals to aquatic life. Potable water discharges can cause erosion and scouring of stream and creek banks, and sedimentation can result if effective BMPs are not implemented. This section of the Permit acknowledges that in cases of emergency discharge, such as from firefighting and disasters, priority of efforts shall be directed toward life, property, and the environment, in that order. Therefore, Permittees are required to implement BMPs that do not interfere with immediate emergency response operations or impact public health and safety. Reporting requirements for such events shall be determined by Water Board staff on a case-by-case basis.

Provision C.15.b.iv. Individual Residential Car Washing. Soaps and automotive pollutants such as oil and metals can be discharged into storm drains and waterbodies from individual residential car washing activities. However, it is not feasible to prohibit individual residential car washing because it would require too much resources for the Permittees to regulate the prohibition. This section of the Permit requires Permittees to encourage residents to implement BMPs such as directing car washwaters to landscaped areas, using as little detergent as possible, and washing cars at commercial car washing facilities.

Provision C.15.b.v. Swimming Pool, Hot tub, Spa, and Fountain Water Discharges. These types of discharges can contain high levels of chlorine and copper. Permittees shall prohibit the discharge of such waters that contain chlorine residual, copper algaecide, filter backwash, or other pollutants to the storm drains or to waterbodies. High flow rates into the storm drain or a waterbody could cause erosion and scouring of the stream or creek banks. These types of discharges should be directed to landscaped areas large enough to accommodate the volume or to the sanitary sewer, with the local sanitary sewer's approval. If these discharge options are not feasible and the swimming pool, hot tub, spa, or fountain water discharges must enter the storm drain, they must be dechlorinated to non-detectable levels of chlorine and they must not contain copper algaecide. Flow rate should be regulated to minimize downstream erosion and scouring. We strongly encourage local sanitary sewer agencies to accept these types of non-stormwater discharges, especially for new and rebuilt ones where a connection could be achieved with marginal effort. This provision also requires Permittees to coordinate with local sanitary agencies in these efforts.

Provision C.15.b.v.i. Irrigation Water, Landscape Irrigation, and Lawn or Garden Watering. Fertilizers and pesticides can be washed off of landscaping and discharged into storm drains and waterbodies. However, it is not feasible to prohibit excessive irrigation because it would require too much resource for the Permittees to regulate such a prohibition. It is also not feasible for individual Permittees to ban the use of fertilizers and pesticides. This section of the Permit requires Permittees to promote and/or work with potable water purveyors to promote measures that minimize runoff and pollutant loading from excess irrigation, such as conservation programs, outreach regarding overwatering and less toxic options for pest control and landscape management, the use of drought tolerant and native vegetation, and to implement appropriate illicit discharge response and enforcement for ongoing, large-volume landscape irrigation runoff to the storm drains.

C.16. Discharges to Areas of Special Biological Significance

Legal Authority

Broad Legal Authority: CWA section 402(p)(3)(B)(ii-iii), CWC sections 13377 and 13263, 40 CFR 122.26(d)(2)(i)(B, C, D, E, and F), and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority:

In 1972, the State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan). The State Water Board adopted the most recent amendment to the Ocean Plan on October 16, 2012, and the plan was subsequently approved by the State Office of Administrative Law and U.S. EPA. The State Water Board is responsible for reviewing the Ocean Plan water quality standards and for modifying and adopting standards in accordance with CWA section 303(c)(1) and CWC section 13170.2. Pursuant to CWA sections 13263 and 13377, this Permit implements the Ocean Plan. In accordance with the Ocean Plan, the State Water Board granted an exception to the prohibition of stormwater discharges to Areas of Special Biological Significance (ASBSs), as discussed further below.

Fact Sheet Findings in Support of Provision C.16.

The Ocean Plan prohibits the discharge of waste to designated ASBSs. ASBSs are designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. On March 20, 2012, the State Water Board approved Resolution No. 2012-0012, approving a general exception to the Ocean Plan prohibition against discharges to ASBSs for certain nonpoint source discharges and NPDES-permitted municipal stormwater discharges (ASBS Exception), as long as those discharges are covered under an appropriate authorization to discharge, such as this Order and comply with the Special Protections contained in Attachment B (Special Protections) to that resolution, among other requirements. The ASBS Exception was subsequently amended by State Water Board Resolution No. 2012-0031, which required pollutant reductions to be achieved within six years, in accordance with ASBS Compliance Plans. This provision applies to discharges from the County of San Mateo into the James V. Fitzgerald Marine Reserve ASBS. The provision authorizes the County of San Mateo's stormwater discharge as set forth in the provision and implements the Ocean Plan and the exceptions granted under it by the State Water Board to allow the County of San Mateo to discharge stormwater into the ASBS. The requirements of the Provision are from the ASBS Exception and its Special Protections, which are incorporated into the Order as Attachment E.

Attachment G: Standard NPDES Stormwater Permit Provisions

The following legal authority applies to Attachment J:

Broad Legal Authority: CWA sections 402(p)(3)(B)(ii-iii), CWC section 13377, and federal NPDES regulations 40 CFR 122.26(d)(2)(i)(B, C, D, E, and F) and 40 CFR 122.26(d)(2)(iv).

Specific Legal Authority: Standard provisions, reporting requirements, and notifications are consistent to all NPDES permits and are generally found in federal NPDES regulation 40 CFR 122.41.

Attachment G includes Standard Provisions. These Standard Provisions ensure that NPDES stormwater permits are consistent and compatible with USEPA's federal regulations. Some Standard Provision sections specific to publicly owned sewage treatment works are not included in Attachment G.

Fact Sheet Attachment C10

303(d) Trash Resolution and Staff Report February 2009

Available

**at [http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/
adopted_orders/2009/R2-2009-0008.pdf](http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2009/R2-2009-0008.pdf)**

ATTACHMENT B

Provision C.3.b. Sample Reporting Table

**Provision C.3.b. Sample Reporting Table
Regulated Projects Approved During the Reporting Period 07/15 to 06/16
City of Eden Annual Report FY 2015-16**

Project Name, Project Number, Location, Street Address,	Name of Developer, Project Phase No., ¹ Project Type & Description	Project Watershed ²	Total Site Area, Total Area of Land Disturbed	Total New and/or Replaced Impervious Surface Area ³	Total Pre- and Post-Project Impervious Surface Area ⁴	Status of Project ⁵	Source Control Measures	Site Design Measures	Treatment Systems Installed ⁶	Operation & Maintenance Responsibility Mechanism	Hydraulic Sizing Criteria	Alternative Compliance Measures ^{7,8}	HM Controls ^{9,10}
Private Projects													
Nirvana Estates; Project #05-122; Property bounded by Paradise Lane, Serenity Drive, and Eternity Circle; Eden, CA	Heavenly Homes; Phase 1; Construction of 156 single-family homes and 45 townhomes with commercial shops and underground parking.	Runoff from site drains to Babbling Brook	25 acres site area, 21 acres disturbed	20 acres new	20 acres post-project	Application submitted 12/29/14, Application deemed complete 1/30/15, Project approved 7/16/15	Stenciled inlets, street sweeping, covered parking, car wash pad drains to sanitary sewer	Pervious pavement for all driveways, sidewalks, and commercial plaza	vegetated swales, detention basins,	Conditions of Approval require Homeowners Association to perform regular maintenance. Written record will be made available to City inspectors.	WEF Method	n/a	Contra Costa sizing charts used to design detention basin at Peace Park. Also contributed to in-stream projects in Babbling Brook
Barter Heaven; Project #05-345; Shoppers Lane & Bargain Avenue; 14578 Shoppers Lane, Eden, CA	Deals Galore Development Co.; Demolition of strip mall and parking lot and construction of 500-unit 5-story shopping mall with underground parking and limited outdoor parking.	Runoff from site drains to Bargain River	5 acres site area, 3 acres disturbed	1 acre new, 2 acres replaced	3.5 acres pre-project, 4.5 acres post-project	Application submitted 7/9/15, Application deemed complete 8/2/15, Project approved 12/12/15	Stenciled inlets, trash enclosures, underground parking, street sweeping	One-way aisles to minimize outdoor parking footprint; roof drains to planter boxes	tree wells with bioretention; planter boxes with bioretention	Conditions of Approval require property owner (landlord) to perform regular maintenance. Written record will be made available to City inspectors.	BMP Handbook Method	\$ 250,000 paid to Renew Regional Project sponsored by Riverworks Foundation, 243 Water Way, Eden, CA 408-345-6789	Renew Project includes treatment and HM Controls

**Provision C.3.b. Sample Reporting Table
Regulated Projects Approved During the Reporting Period 07/15 to 06/16
City of Eden Annual Report FY 2015-16**

Project Name, Project Number, Location, Street Address,	Name of Developer, Project Phase No., ¹ Project Type & Description	Project Watershed ²	Total Site Area, Total Area of Land Disturbed	Total New and/or Replaced Impervious Surface Area ³	Total Pre- and Post-Project Impervious Surface Area ⁴	Status of Project ⁵	Source Control Measures	Site Design Measures	Treatment Systems Installed ⁶	Operation & Maintenance Responsibility Mechanism	Hydraulic Sizing Criteria	Alternative Compliance Measures ^{7,8}	HM Controls ^{9,10}
New Beginnings; Project No. #05-456; Hope Street & Chance Road; 567 Hope Boulevard, Eden, CA	Fresh Start Corporation; Demolition of abandoned warehouse and construction of a 5-story building with 250 low-income rental housing units.	Runoff from site drains to Poor Man Creek	5 acres site area, 100,000 ft ² disturbed	1 acre replaced	2 acres pre-project, 1 acre post-project	Application submitted 2/9/16, Application deemed complete 4/10/16; Project approved 6/30/16	Trash enclosures, underground parking, street sweeping, car wash pad drains to sanitary sewer	roof drains to landscaping	parking runoff flows to six bioretention units/gardens	Conditions of Approval require property owner (landlord) to perform regular maintenance. Written record will be made available to City inspectors.	BMP Handbook Method	n/a	n/a
Public Projects													
Gridlock Relief, Project No. #05-99, ABC Blvd between Main and Huett Streets, Eden, CA	City of Eden. Widening of ABC Blvd from 4 to 6 lanes	Runoff from site drains to Congestion River	6 acres site area, 3 acres disturbed	2 acres new, 1 acre replaced	4 acres pre-project, 6 acres post-project	Application submitted 7/9/15, Application deemed complete 10/6/15, Project approved 12/9/15, Construction scheduled to begin 7/10/16	none	ABC Blvd sloped to drain runoff into landscaped areas in median	Runoff leaving underdrain system of landscaped median is pumped to bioretention gardens along either side of ABC Blvd	Signed statement from City of Eden assuming post-construction responsibility for treatment BMP maintenance.	WEF Method	n/a	BAHM used to design and size stormwater treatment units so that increased runoff is detained.

Sample Reporting Table C.3.b. Footnotes

1. If a project is being constructed in Phases, use a separate row entry for each Phase.
2. State the watershed(s) that the Regulated Project drains to. Optional but recommended: Also state the downstream watershed(s).
3. State both the total new impervious surface area and the total replaced impervious surface area, as applicable.
4. For redevelopment projects state both the pre-project impervious surface area and the post-project impervious surface area.
5. State project application date; application deemed complete date; and final, major, staff-level discretionary review and approval date.
6. List stormwater treatment system(s) installed onsite or at a joint stormwater treatment system facility.
7. For Alternative Compliance at an offsite location in accordance with Provision C.3.e.i.(1), on a separate page, give a discussion of the alternative compliance site including the information specified in Provision C.3.b.iv.(2)(m)(i) for the offsite project.
8. For Alternative Compliance by paying in-lieu fees in accordance with Provision C.3.e.i.(2), on a separate page, provide the information specified in Provision C.3.b.iv.(2)(m)(ii) for the Regional Project.
9. If HM control is not required, state why not.
10. If HM control is required, state control method used (e.g., method to design and size device(s) or method(s) used to meet the HM Standard, and description of device(s) or method(s) used, such as detention basin(s), bioretention unit(s), regional detention basin, or in-stream control).

Instructions for Provision C.3.b. Sample Reporting Table

1. **Project Name, Number, Location, and Street Address** – Include the following information:
 - Name of the project
 - Number of the project (if applicable)
 - Location of the project with cross streets
 - Street address of the project (if available)

2. **Name of Developer, Project Phase Number, Project Type, and Project Description** – Include the following information:
 - Name of the developer
 - Project phase name and/or number (only if the project is being developed in phases) – each phase should have a separate row entry
 - Type of development (i.e., new and/or redevelopment)
 - Description of development (e.g., 5-story office building, residential with 160 single-family homes with five 4-story buildings to contain 200 condominiums, 100 unit 2-story shopping mall, mixed use retail and residential development (apartments), industrial warehouse)

3. **Project Watershed**
 - State the watershed(s) that the Project drains into
 - Optional but recommended: Also state the downstream watershed(s)

4. **Total Site Area and Total Area of Land Disturbed** – State the total site area and the total area of land disturbed.

5. **Total New and/or Replaced Impervious Surface Area**
 - State the total new impervious surface area
 - State the total replaced impervious surface area, as applicable

6. **Total Pre- and Post-Project Impervious Surface Area** – For redevelopment projects, state both the pre-project impervious surface area and the post-project impervious surface area.

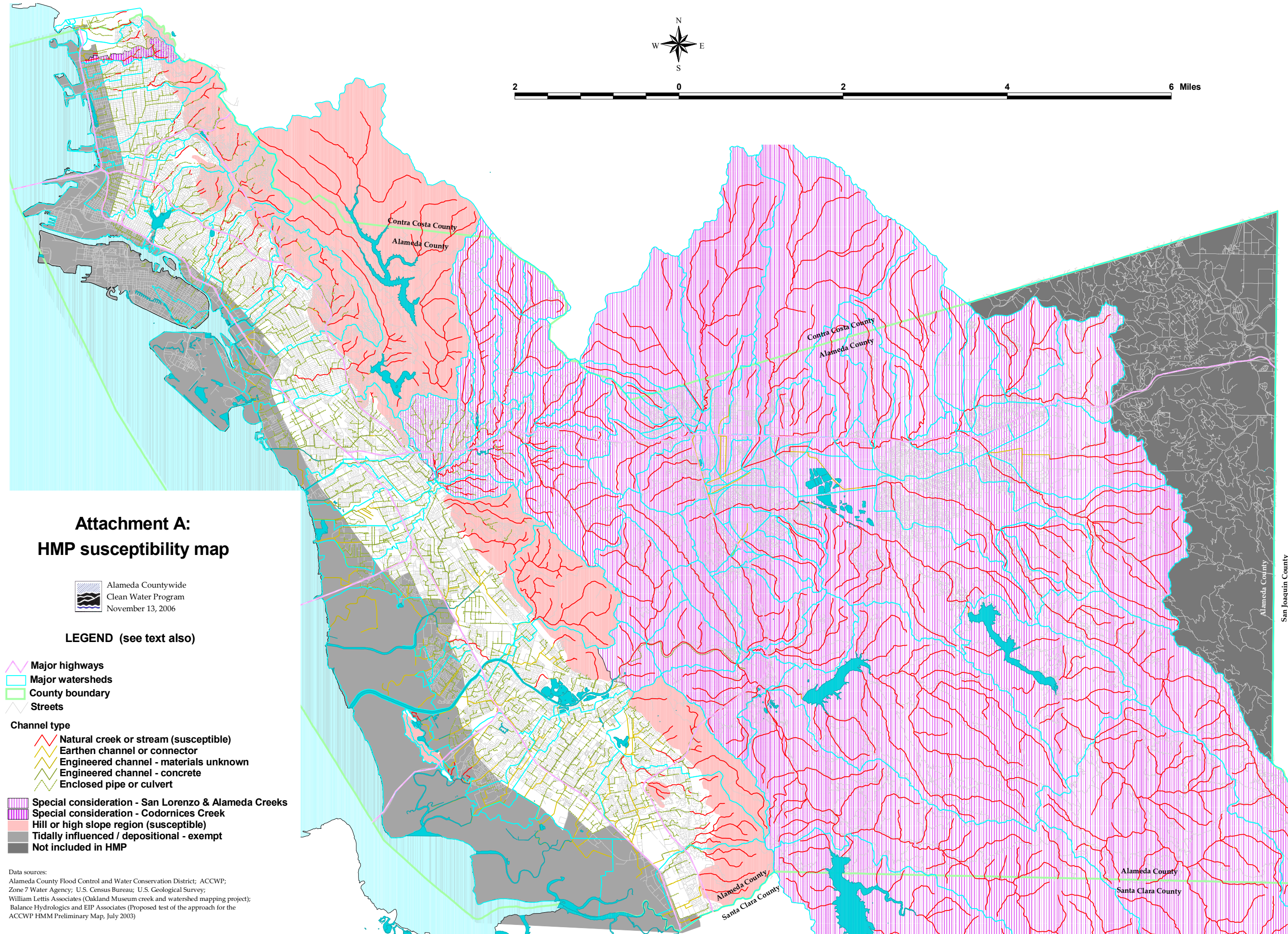
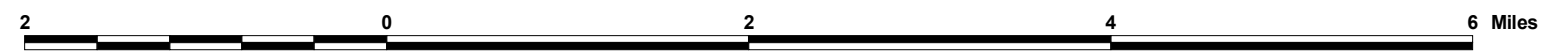
7. **Status of Project** – Include the following information:
 - Project application submittal date
 - Project application deemed complete date
 - Final, major, staff-level discretionary review and approval date

8. **Source Control Measures** – List all source control measures that have been or will be included in the project.


9. **Site Design Measures** – List all site design measures that have been or will be included in the project.
10. **Treatment Systems Installed** – List all post-construction stormwater treatment system(s) installed onsite and/or at a joint stormwater treatment system facility.
11. **Operation and Maintenance Responsibility Mechanism** – List the legal mechanism(s) that have been or will be used to assign responsibility for the maintenance of the post-construction stormwater treatment systems.
12. **Hydraulic Sizing Criteria Used** – List the hydraulic sizing criteria used for the Project.
13. **Alternative Compliance Measures**
 - **Option 1: LID Treatment at an Offsite Location (Provision C.3.e.i.(1))** – On a separate page, give a discussion of the alternative compliance project including the information specified in Provision C.3.b.v.(1)(m)(i) for the offsite project.
 - **Option 2: Payment of In-Lieu Fees (Provision C.3.e.i.(2))** – On a separate page, provide the information specified in Provision C.3.b.v.(1)(m)(ii).
14. **HM Controls**
 - If HM control is not required, state why not
 - If HM control is required, state control method used (e.g., method to design and size device(s), method(s) used to meet the HM Standard, and description of device(s) or method(s) used, such as detention basin(s), bioretention unit(s), regional detention basins, or in-stream control)

ATTACHMENT C





Provision C.3.g. Hydromodification Applicability Map













Attachment A: HMP susceptibility map

 Alameda Countywide
Clean Water Program
November 13, 2006

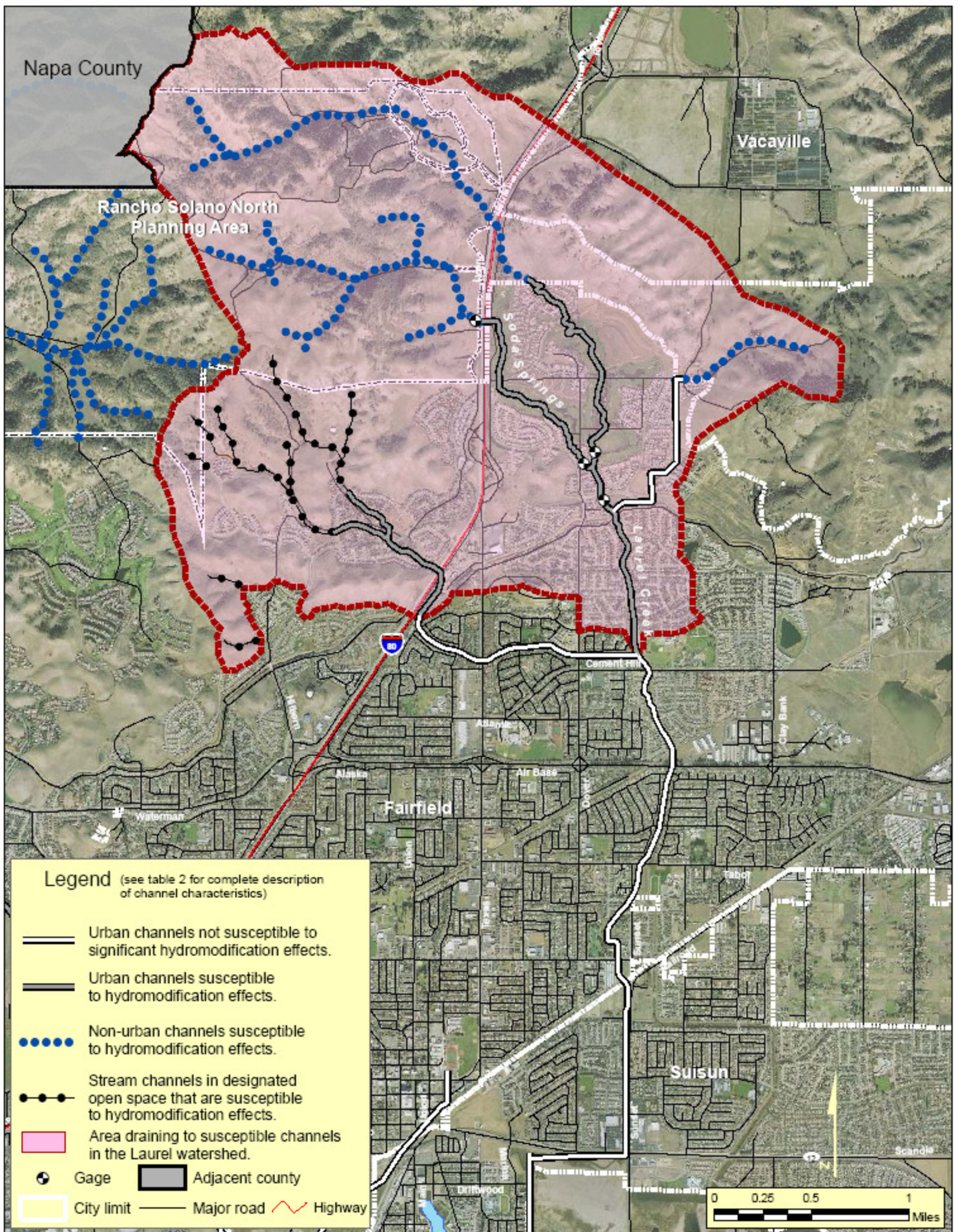
LEGEND (see text also)

-  Major highways
-  Major watersheds
-  County boundary
-  Streets

- Channel type**
-  Natural creek or stream (susceptible)
-  Earthen channel or connector
-  Engineered channel - materials unknown
-  Engineered channel - concrete
-  Enclosed pipe or culvert

-  Special consideration - San Lorenzo & Alameda Creeks
-  Special consideration - Codornices Creek
-  Hill or high slope region (susceptible)
-  Tidally influenced / depositional - exempt
-  Not included in HMP

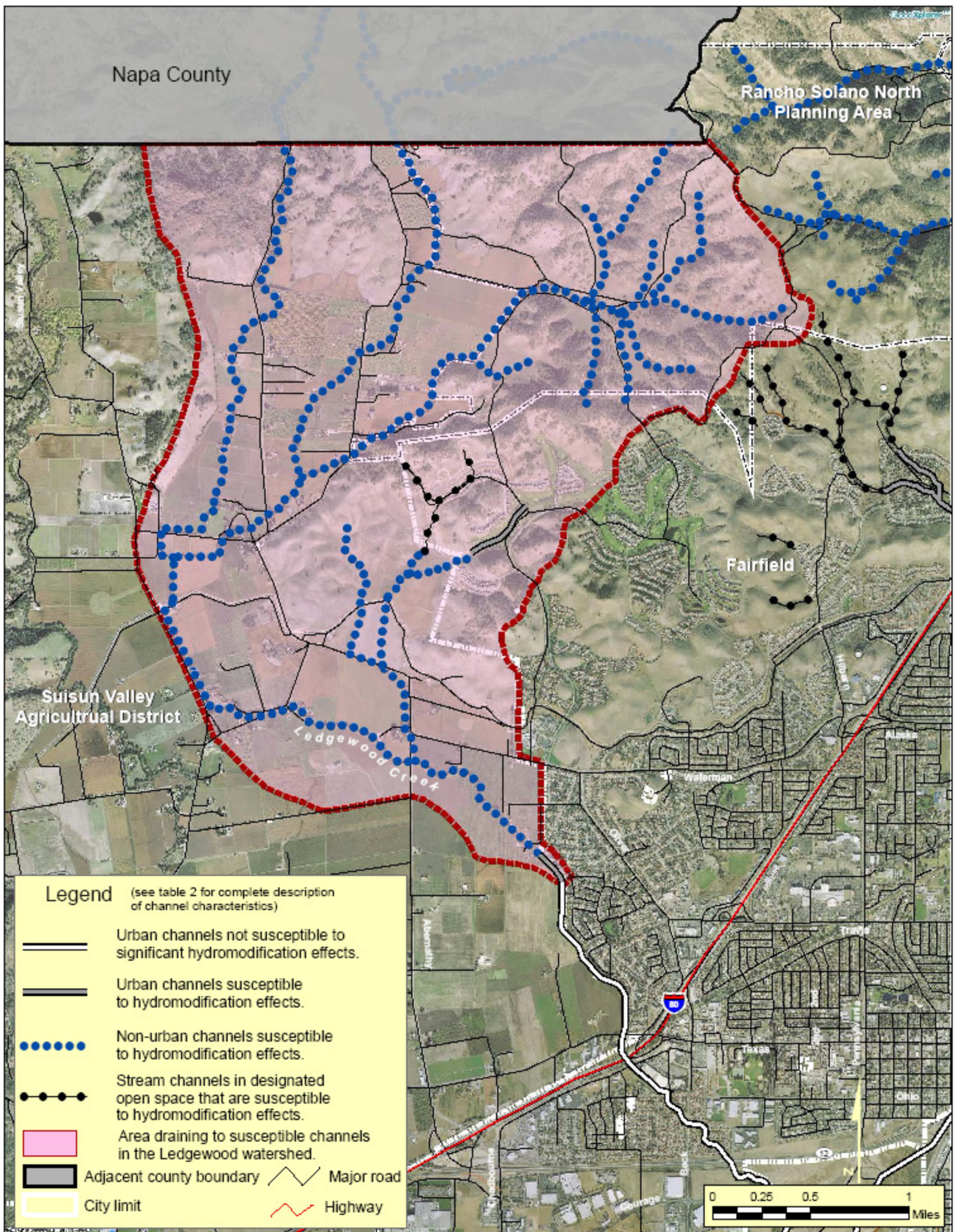
Data sources:
Alameda County Flood Control and Water Conservation District; ACCWP;
Zone 7 Water Agency; U.S. Census Bureau; U.S. Geological Survey;
William Lettis Associates (Oakland Museum creek and watershed mapping project);
Balance Hydrologics and EIP Associates (Proposed test of the approach for the
ACCWP HMM Preliminary Map, July 2003)



Source: Basemap data provided by Fairfield-Suisun Sewer District. Note that the roads layer does not include the most recently urbanized areas (north of Cement Hill Road, for example).



Figure 2. Map showing HMP channel Classification for the Laurel Creek watershed. The mid- to upper reaches include all channels within the watershed that are susceptible to hydromodification effects (dotted and gray-shaded channels on this map). Hydromodification controls are not required for projects that drain directly to non-susceptible urban channels.

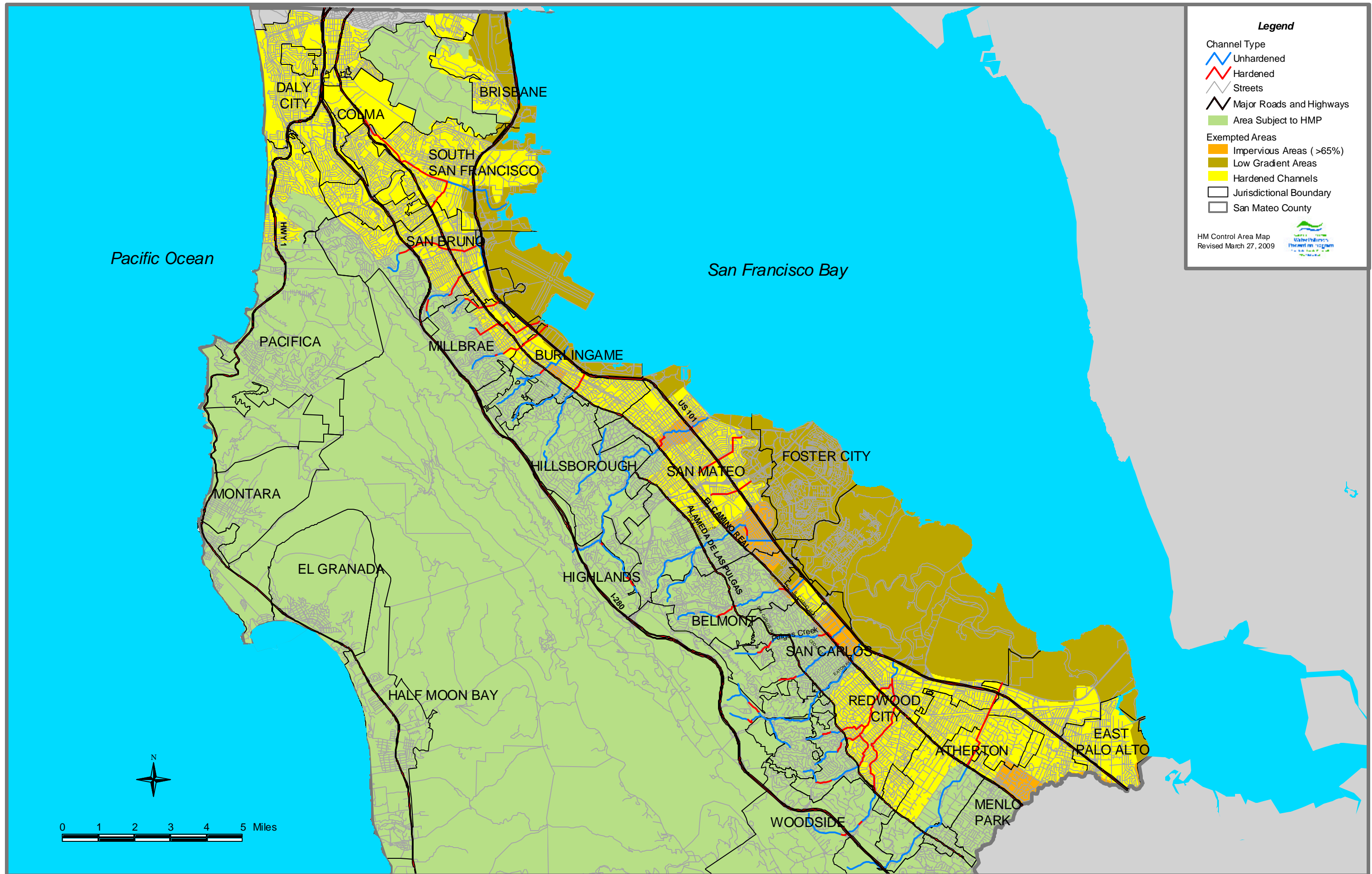


Basemap data provided by Fairfield-Suisun Sewer District. Note that the roads layer does not include the most recently urbanized areas, as shown in the aerial photo.













Figure 3. Map showing HMP channel Classification for the Ledgewood Creek watershed.

The mid- to upper reaches include all channels within the watershed that are susceptible to hydromodification effects (dotted and gray-shaded channels on this map), however areas outside the City of Fairfield are not included in this permit unless annexed by the city. The non-developed areas within the current city limits are designated open space in relatively steep terrain, and are unlikely to be converted to urban areas however the HMP still applies in these areas.



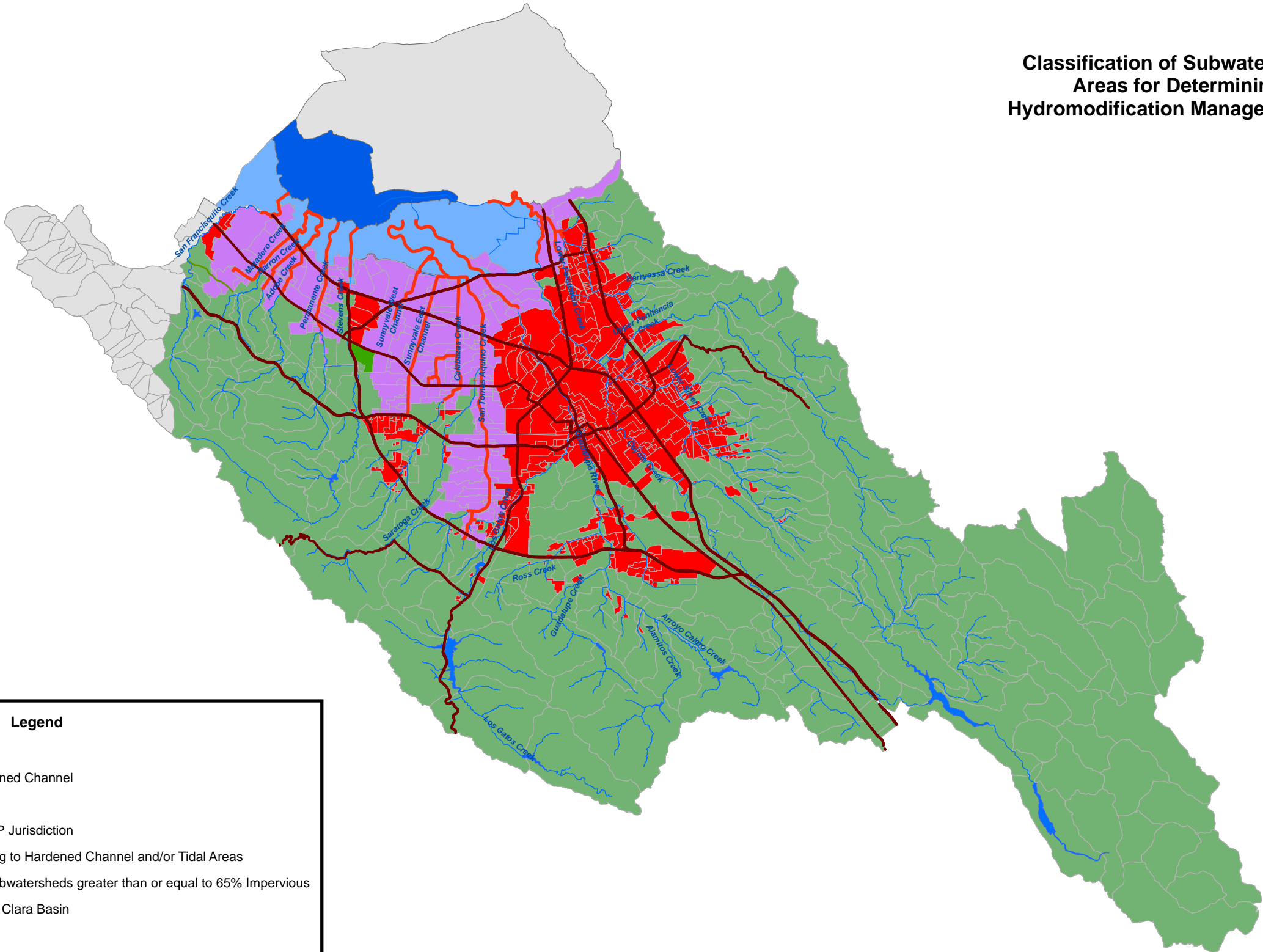
Legend

- Channel Type
-  Unhardened
 -  Hardened
 -  Streets
 -  Major Roads and Highways
 -  Area Subject to HMP
- Exempted Areas
-  Impervious Areas (>65%)
 -  Low Gradient Areas
 -  Hardened Channels
 -  Jurisdictional Boundary
 -  San Mateo County

HM Control Area Map
Revised March 27, 2009



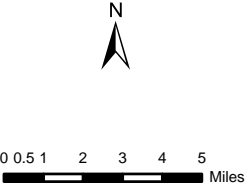
Classification of Subwatersheds and Catchment Areas for Determining Applicability of Hydromodification Management (HM) Requirements



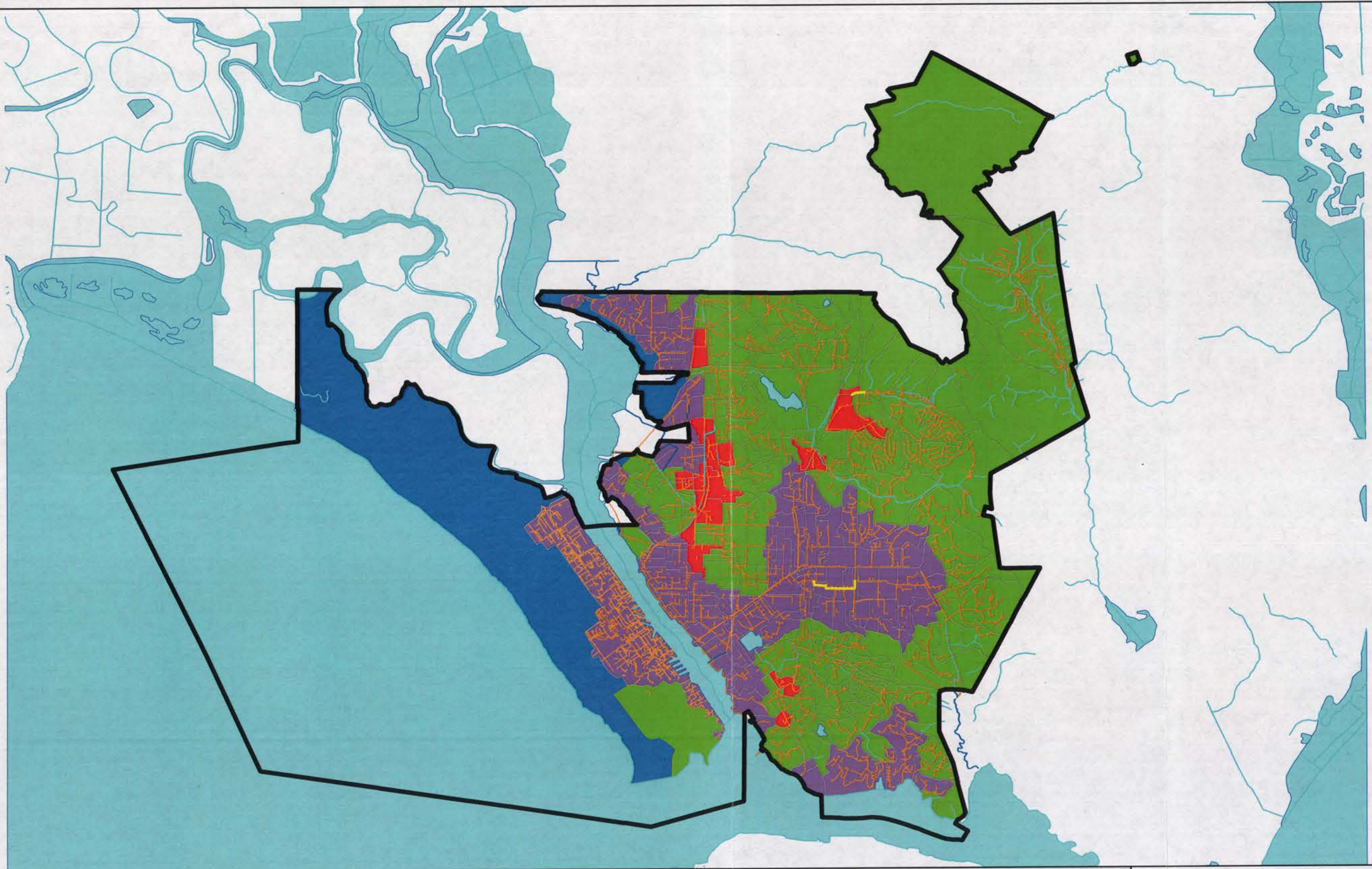
Legend

- Major Roads
- Continuously Hardened Channel
- Major Creeks
- Outside SCVURPPP Jurisdiction
- Catchments Draining to Hardened Channel and/or Tidal Areas
- Catchments and Subwatersheds greater than or equal to 65% Impervious
- Reservoirs in Santa Clara Basin
- Baylands
- Subwatersheds less than 65% Impervious

Revision Date: November 2010

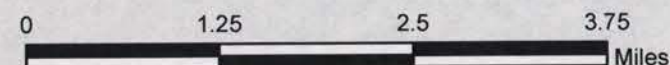


This map contains revisions to the March 2009 version to reflect updated impervious surface data and/or catchment boundaries in the Cities of San Jose, Sunnyvale, Mountain View, and Milpitas, as described in the report to the Water Board dated October 14, 2010, consistent with the HM applicability criteria set forth in Attachment F, Section 4 of the MRP.



Legend

- HMP Boundary
- Fully Hardened Channels
- Non-Hardened Channels (Non-Tidal)
- Non-Hardened Channels (Tidal)
- Storm Drain System
- Open Water
- Areas Draining to Continuously Hardened Conveyances to the Bay
- HMP Applicable Areas
- Subcatchments with greater than or equal to 65% Impervious
- Baylands



HMP Applicability Map

Vallejo HMP



WW1538

April 2013

Figure

3-1

ATTACHMENT D

Provision C.8. Standard Monitoring Provisions

All monitoring activities shall meet the following requirements:

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. [40 CFR 122.41(j)(1)]
2. Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, and copies of all reports required by this Order for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Water Board or USEPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge. [40 CFR 122.41(j)(2), CWC section 13383(a)]
3. Records of monitoring information shall include [40 CFR 122.41(j)(3)]:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and,
 - f. The results of such analyses.
4. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both. [40 CFR 122.41(j)(5)]
5. Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the monitoring Provisions. [40 CFR 122.41(l)(4)(iii)]
6. All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services or a laboratory approved by the Executive Officer.
7. For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Permittees shall instruct their laboratories to establish calibration standards that are equivalent to or lower than the Minimum Levels (MLs) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). If a Permittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Permittee must submit documentation from the laboratory to the Water Board for approval prior to raising the ML for any priority toxic pollutant.

8. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both. [40 CFR 122.41(k)(2)]
9. If a Permittee monitors any pollutant more frequently than required by the Permit, unless otherwise specified in the Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the reports requested by the Water Board. [40 CFR 122.41(l)(4)(ii)]

ATTACHMENT E

Supporting Information for Provision C.10.

Permittee 2009 Mapped Acreages of Trash Generation Rates

Minimum Full Trash Capture Area

Minimum Trash Hot Spots to be Annually Cleaned

And

Example Trash Generation Rate Map

Table 1. Trash Generation Areas Mapped as of June 2015

County	Permittee	Trash Generation Category (acres) as presented in Long-Term Trash Reduction Plans				
		Low	Moderate	High	Very High	Total
Alameda	Alameda	3,729	1,496	263	10	5,498
Alameda	Alameda County	229,012	2,434	347	-	231,793
Alameda	Albany	555	305	119	12	991
Alameda	Berkeley	2,792	2,317	763	216	6,088
Alameda	Dublin	6,498	859	289	-	7,645
Alameda	Emeryville	68	351	171	125	715
Alameda	Fremont	30,166	6,465	740	-	37,372
Alameda	Hayward	10,745	7,008	1,395	165	19,312
Alameda	Livermore	11,355	3,325	534	-	15,214
Alameda	Newark	2,918	1,816	631	25	5,391
Alameda	Oakland	14,432	5,663	4,860	3,465	28,420
Alameda	Piedmont	977	109	1	-	1,086
Alameda	Pleasanton	13,172	1,416	176	-	14,765
Alameda	San Leandro	2,818	4,044	790	77	7,729
Alameda	Union City	10,234	1,660	228	-	12,122
Contra Costa	Concord	10,832	2,415	678	72	13,997
Contra Costa	Contra Costa County	174,854	3,707	1,717	118	180,396
Contra Costa	Danville	11,282	106	3	-	11,391
Contra Costa	El Cerrito	1,817	311	169	4	2,301
Contra Costa	Hercules	3,753	188	12	-	3,952
Contra Costa	Lafayette	9,252	245	1	-	9,498
Contra Costa	Martinez	5,004	1,777	93	1	6,875
Contra Costa	Moraga	5,711	92	125	-	5,929
Contra Costa	Orinda	7,764	232	50	-	8,046
Contra Costa	Pinole	2,827	136	171	-	3,134
Contra Costa	Pittsburg	5,824	2,892	210	132	9,058

County	Permittee	Trash Generation Category (acres) as presented in Long-Term Trash Reduction Plans				
		Low	Moderate	High	Very High	Total
Contra Costa	Pleasant Hill	2,873	1,080	371	22	4,346
Contra Costa	Richmond	10,704	4,538	1,774	269	17,285
Contra Costa	San Pablo	325	682	481	72	1,560
Contra Costa	San Ramon	10,536	1,184	-	-	11,720
Contra Costa	Walnut Creek	11,329	963	115	-	12,407
San Mateo	Atherton	2,984	230	-	-	3,214
San Mateo	Belmont	2,517	240	62	-	2,820
San Mateo	Brisbane	1,220	473	60	21	1,775
San Mateo	Burlingame	1,964	592	99	-	2,654
San Mateo	Colma	1,026	122	74	4	1,225
San Mateo	Daly City	2,553	1,015	407	-	3,975
San Mateo	East Palo Alto	97	879	356	97	1,428
San Mateo	Foster City	2,187	109	-	-	2,296
San Mateo	Half Moon Bay	3,657	187	51	-	3,895
San Mateo	Hillsborough	3,944	7	-	-	3,950
San Mateo	Menlo Park	4,811	292	3	-	5,106
San Mateo	Millbrae	1,512	369	79	-	1,959
San Mateo	Pacifica	7,321	472	104	-	7,898
San Mateo	Portola Valley	5,786	5	-	-	5,790
San Mateo	Redwood City	7,128	398	1,576	398	9,502
San Mateo	San Bruno	2,065	965	57	-	3,088
San Mateo	San Carlos	2,584	604	78	-	3,265
San Mateo	San Mateo	4,340	2,343	302	-	6,985
San Mateo	San Mateo County	172,050	272	362	-	172,683
San Mateo	South San Francisco	2,724	2,321	337	-	5,382
San Mateo	Woodside	6,989	2	-	-	6,991
Santa Clara	Campbell	2,335	1,133	273	-	3,741
Santa Clara	Cupertino	5,446	1,161	274	-	6,881
Santa Clara	Los Altos	3,966	10	14	-	3,990
Santa Clara	Los Altos Hills	5,377	6	-	-	5,383
Santa Clara	Los Gatos	6,275	698	-	-	6,973
Santa Clara	Milpitas	5,065	3,002	98	2	8,167

County	Permittee	Trash Generation Category (acres) as presented in Long-Term Trash Reduction Plans				
		Low	Moderate	High	Very High	Total
Santa Clara	Monte Sereno	1,018	9	-	-	1,027
Santa Clara	Mountain View	3,882	2,626	460	-	6,968
Santa Clara	Palo Alto	12,592	1,539	53	-	14,184
Santa Clara	San Jose	73,366	21,823	5,709	549	101,447
Santa Clara	Santa Clara	5,217	4,855	841	12	10,925
Santa Clara	Santa Clara County	380,316	678	1,123	-	382,117
Santa Clara	Saratoga	7,207	409	-	-	7,616
Santa Clara	Sunnyvale	7,082	4,075	907	11	12,075
Solano	Fairfield	18,578	240	57	-	18,875
Solano	Suisun City	2,043	12	9	-	2,064
Solano	Vallejo	10,980	4,314	1,948	476	17,718
	Total	1,404,362	118,302	33,046	6,355	1,562,066

Table 2. Minimum Trash Capture Area and Trash Hot Spots for
Population Based Permittees

Data Source: <http://quake.abag.ca.gov/mitigation/pickdbh2.html> and Association of Bay Area Governments, 2005
ABAG Land Use Existing Land Use in 2005: Report and Data for Bay Area Counties

	Population	Retail / Wholesale Commercial Acres	Minimum Full Trash Capture Catchment Area (Acres) ¹	# of Trash Hot Spots per 30K Population	# of Trash Hot Spots per 100 Retail / Wholesale Commercial Acres	Minimum # of Trash Hot Spots ²
Alameda County						
San Leandro	73,402	721	216	2	7	4
Oakland	420,183	759	228	14	8	8
Dublin	46,934	377	113	1	3	3
Emeryville	9,727	69	21	1	1	1
Albany	16,877	95	28	1	1	1
Berkeley	106,697	183	55	3	1	3
Alameda County Unincorporated.	140,825	375	112	4	3	4
Alameda	75,823	402	121	2	4	4
Fremont	213,512	698	209	7	6	7
Hayward	149,205	726	218	4	7	7
Livermore	83,604	423	127	2	4	4
Newark	43,872	314	94	1	3	3
Piedmont	11,100	1	0	1	1	1
Pleasanton	69,388	366	110	2	3	3
Union City	73,402	183	55	2	1	2

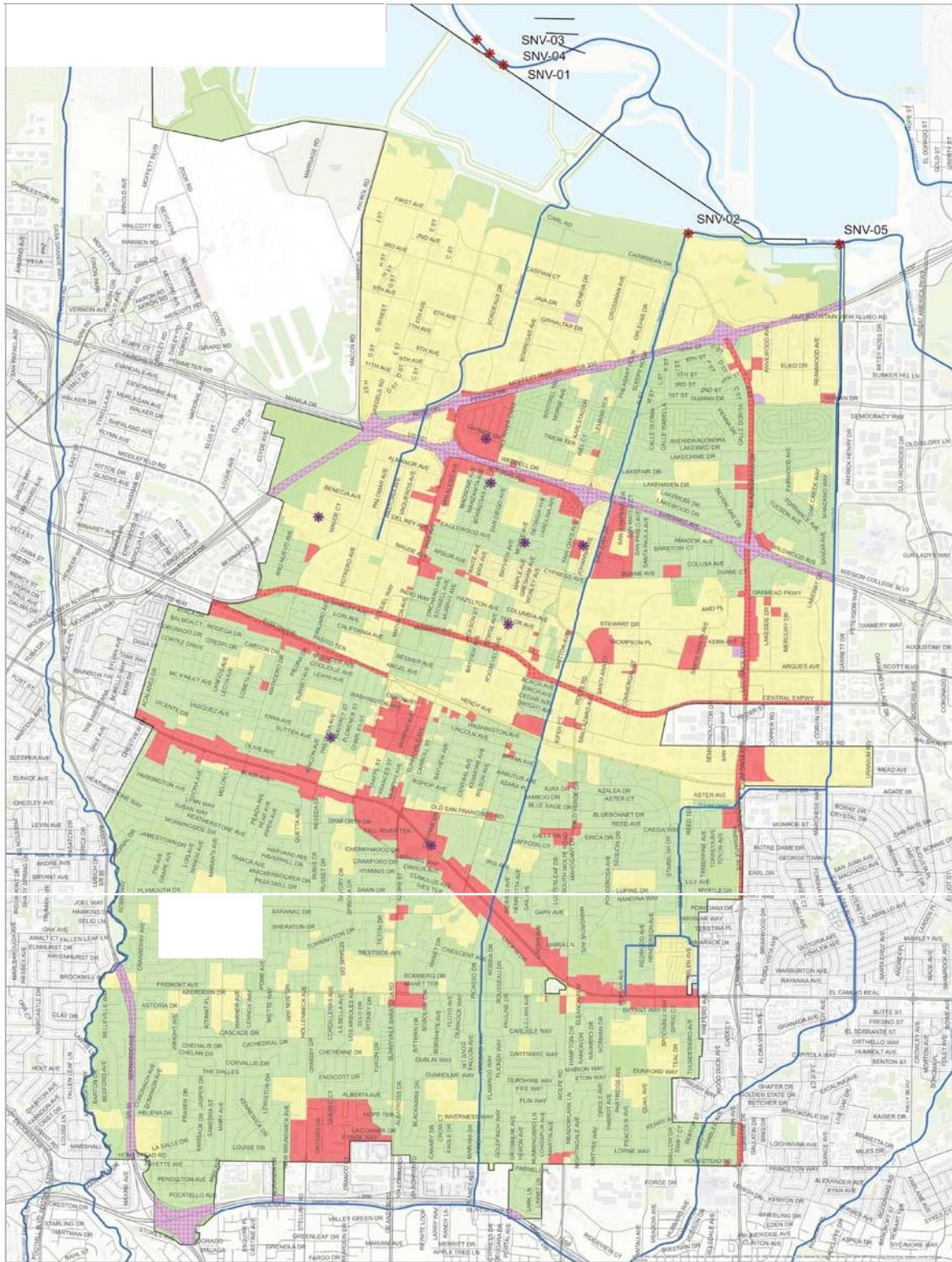
¹ 30% of Retail / Wholesale Commercial Acres – If population under 12,000 and Retail/Wholesale Commercial < 40 acres, Permittee is exempt from Minimum Full Trash Capture Requirement – C.10.iii.a.

² If the hot spot # based on % commercial area is more than twice that based on population, the minimum hot spot # is double the population based #.

	Population	Retail / Wholesale Commercial Acres	Minimum Full Trash Capture Catchment Area (Acres) ¹	# of Trash Hot Spots per 30K Population	# of Trash Hot Spots per 100 Retail / Wholesale Commercial Acres	Minimum # of Trash Hot Spots ²
San Mateo County						
San Mateo County Unincorporated.	65,844	71	21	2	1	2
Atherton	7,475	0	0	1	1	1
Belmont	26,078	58	17	1	1	1
Brisbane	3,861	16	0	1	1	1
Burlingame	28,867	123	37	1	1	1
Colma	1,613	106	0	1	1	1
Portola Valley	4,639	9	0	1	1	1
Daly City	106,361	242	73	3	2	3
East Palo Alto	32,897	59	18	1	1	1
Foster City	30,308	67	20	1	1	1
Half Moon Bay	13,046	49	15	1	1	1
Hillsborough	11,272	0	0	1	1	1
Menlo Park	31,490	83	25	1	1	1
Millbrae	21,387	68	20	1	1	1
Pacifica	39,616	100	30	1	1	1
Redwood City	77,269	309	93	2	3	3
San Bruno	43,444	137	41	1	1	1
San Carlos	28,857	129	39	1	1	1
San Mateo	95,776	275	82	3	2	3
South San Francisco	63,744	195	58	2	1	2
Woodside	5,625	9	0	1	1	1

	Population	Retail / Wholesale Commercial Acres	Minimum Full Trash Capture Catchment Area (Acres) ¹	# of Trash Hot Spots per 30K Population	# of Trash Hot Spots per 100 Retail / Wholesale Commercial Acres	Minimum # of Trash Hot Spots ²
Contra Costa County						
Contra Costa County Unincorporated.	152,744	524	157	5	5	5
Concord	123,776	1016	305	4	10	8
Walnut Creek	65,306	329	99	2	3	3
Clayton	10,784	21	(0)	1	1	1
Danville	42,629	134	40	1	1	1
El Cerrito	23,320	105	32	1	1	1
Hercules	24,324	37	11	1	1	1
Lafayette	23,962	68	20	1	1	1
Martinez	36,144	142	43	1	1	1
Moraga	16,138	108	32	1	1	1
Orinda	17,542	24	7	1	1	1
Pinole	19,193	140	42	1	1	1
Pittsburg	63,652	520	156	2	5	4
Pleasant Hill	33,377	219	66	1	2	2
Richmond	103,577	391	117	3	3	3
San Pablo	31,190	131	39	1	1	1
San Ramon	59,002	274	82	1	2	2
Santa Clara County						
Santa Clara County Unincorporated	99,122	270	47	3	3	3
Campbell	38,889	137	41	1	1	1
Cupertino	55,551	213	64	2	2	2
Los Altos	28,291	65	20	1	1	1

	Population	Retail / Wholesale Commercial Acres	Minimum Full Trash Capture Catchment Area (Acres) ¹	# of Trash Hot Spots per 30K Population	# of Trash Hot Spots per 100 Retail / Wholesale Commercial Acres	Minimum # of Trash Hot Spots ²
Los Altos Hills	8,837	0	0	1	1	1
Los Gatos	30,296	163	49	1	1	1
Milpitas	69,419	457	137	2	4	4
Monte Sereno	3,579	0	0	1	1	1
Mountain View	73,932	375	112	2	3	3
Santa Clara	115,503	560	168	3	5	5
Saratoga	31,592	41	12	1	1	1
San Jose	989,496	2983	895	32	29	32
Sunnyvale	137,538	548	164	3	5	5
Palo Alto	63,367	282	84	2	2	2
Solano County						
Vallejo	120,416	559	168	4	5	5
Fairfield	106,142	486	146	3	4	4
Suisun	28,031	75	22	1	1	1
Totals	4,930,339	19057	5718	165	184	349



ATTACHMENT F

**State Water Resources Control Board
Resolution No. 2012-0031, Attachment B
Special Protections for Areas of Biological Significance**

**STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 2012-0031**

Attachment B - Special Protections for Areas of Special Biological Significance, Governing Point Source Discharges of Storm Water and Nonpoint Source Waste Discharges

I. PROVISIONS FOR POINT SOURCE DISCHARGES OF STORM WATER AND NONPOINT SOURCE WASTE DISCHARGES

The following terms, prohibitions, and special conditions (hereafter collectively referred to as special conditions) are established as limitations on point source storm water and nonpoint source discharges. These special conditions provide Special Protections for marine aquatic life and natural water quality in Areas of Special Biological Significance (ASBS), as required for State Water Quality Protection Areas pursuant to California Public Resources Code Sections 36700(f) and 36710(f). These Special Protections are adopted by the State Water Board as part of the California Ocean Plan (Ocean Plan) General Exception.

The special conditions are organized by category of discharge. The State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (Regional Water Boards) will determine categories and the means of regulation for those categories [e.g., Point Source Storm Water National Pollutant Discharge Elimination System (NPDES) or Nonpoint Source].

A. PERMITTED POINT SOURCE DISCHARGES OF STORM WATER

1. General Provisions for Permitted Point Source Discharges of Storm Water

- a. Existing storm water discharges into an ASBS are allowed only under the following conditions:

- (1) The discharges are authorized by an NPDES permit issued by the State Water Board or Regional Water Board;
- (2) The discharges comply with all of the applicable terms, prohibitions, and special conditions contained in these Special Protections; and
- (3) The discharges:
 - (i) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
 - (ii) Are designed to prevent soil erosion;
 - (iii) Occur only during wet weather;
 - (iv) Are composed of only storm water runoff.

- b. Discharges composed of storm water runoff shall not alter natural ocean water quality in an ASBS.
 - c. The discharge of trash is prohibited.
 - d. Only discharges from existing storm water outfalls are allowed. Any proposed or new storm water runoff discharge shall be routed to existing storm water discharge outfalls and shall not result in any new contribution of waste to an ASBS (i.e., no additional pollutant loading). "Existing storm water outfalls" are those that were constructed or under construction prior to January 1, 2005. "New contribution of waste" is defined as any addition of waste beyond what would have occurred as of January 1, 2005. A change to an existing storm water outfall, in terms of re-location or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.
 - e. Non-storm water discharges are prohibited except as provided below:
 - (1) The term "non-storm water discharges" means any waste discharges from a municipal separate storm sewer system (MS4) or other NPDES permitted storm drain system to an ASBS that are not composed entirely of storm water.
 - (2) (i) The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability or occur naturally:
 - (a) Discharges associated with emergency fire fighting operations.
 - (b) Foundation and footing drains.
 - (c) Water from crawl space or basement pumps.
 - (d) Hillside dewatering.
 - (e) Naturally occurring groundwater seepage via a storm drain.
 - (f) Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.
 - (ii) An NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS only to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS.
 - (3) Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.
2. Compliance Plans for Inclusion in Storm Water Management Plans (SWMP) and Storm Water Pollution Prevention Plans (SWPPP).

The discharger shall specifically address the prohibition of non-storm water runoff and the requirement to maintain natural water quality for storm water discharges to an ASBS in an ASBS Compliance Plan to be included in its SWMP or a SWPPP, as appropriate to permit type. If a statewide permit includes a SWMP, then the discharger shall prepare a stand-alone compliance

plan for ASBS discharges. The ASBS Compliance Plan is subject to approval by the Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (for permits issued by Regional Water Boards).

- a. The Compliance Plan shall include a map of surface drainage of storm water runoff, showing areas of sheet runoff, prioritize discharges, and describe any structural Best Management Practices (BMPs) already employed and/or BMPs to be employed in the future. Priority discharges are those that pose the greatest water quality threat and which are identified to require installation of structural BMPs. The map shall also show the storm water conveyances in relation to other features such as service areas, sewage conveyances and treatment facilities, landslides, areas prone to erosion, and waste and hazardous material storage areas, if applicable. The SWMP or SWPPP shall also include a procedure for updating the map and plan when changes are made to the storm water conveyance facilities.
- b. The ASBS Compliance Plan shall describe the measures by which all non-authorized non-storm water runoff (e.g., dry weather flows) has been eliminated, how these measures will be maintained over time, and how these measures are monitored and documented.
- c. For Municipal Separate Storm Sewer System (MS4s), the ASBS Compliance Plan shall require minimum inspection frequencies as follows:
 - (1) The minimum inspection frequency for construction sites shall be weekly during rainy season;
 - (2) The minimum inspection frequency for industrial facilities shall be monthly during the rainy season;
 - (3) The minimum inspection frequency for commercial facilities (e.g., restaurants) shall be twice during the rainy season; and
 - (4) Storm water outfall drains equal to or greater than 18 inches (457 mm) in diameter or width shall be inspected once prior to the beginning of the rainy season and once during the rainy season and maintained to remove trash and other anthropogenic debris.
- d. The ASBS Compliance Plan shall address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff, that are necessary to comply with these special conditions, will be achieved through BMPs. Structural BMPs need not be installed if the discharger can document to the satisfaction of the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits) that such installation would pose a threat to health or safety. BMPs to control storm water runoff discharges (at the end-of-pipe) during a design storm shall be designed to achieve on average the following target levels:
 - (1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or

(2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

The baseline for these determinations is the effective date of the Exception, except for those structural BMPs installed between January 1, 2005 and adoption of these Special Protections, and the reductions must be achieved and documented within six (6) years of the effective date.

- e. The ASBS Compliance Plan shall address erosion control and the prevention of anthropogenic sedimentation in ASBS. The natural habitat conditions in the ASBS shall not be altered as a result of anthropogenic sedimentation.
- f. The ASBS Compliance Plan shall describe the non-structural BMPs currently employed and planned in the future (including those for construction activities), and include an implementation schedule. The ASBS Compliance Plan shall include non-structural BMPs that address public education and outreach. Education and outreach efforts must adequately inform the public that direct discharges of pollutants from private property not entering an MS4 are prohibited. The ASBS Compliance Plan shall also describe the structural BMPs, including any low impact development (LID) measures, currently employed and planned for higher threat discharges and include an implementation schedule. To control storm water runoff discharges (at the end-of-pipe) during a design storm, Permittees must first consider, and use where feasible, LID practices to infiltrate, use, or evapotranspire storm water runoff on-site, if LID practices would be the most effective at reducing pollutants from entering the ASBS.
- g. The BMPs and implementation schedule shall be designed to ensure that natural water quality conditions in the receiving water are achieved and maintained by either reducing flows from impervious surfaces or reducing pollutant loading, or some combination thereof.
- h. If the results of the receiving water monitoring described in IV.B. of these special conditions indicate that the storm water runoff is causing or contributing to an alteration of natural ocean water quality in the ASBS, the discharger shall submit a report to the State Water Board and Regional Water Board within 30 days of receiving the results.
 - (1) The report shall identify the constituents in storm water runoff that alter natural ocean water quality and the sources of these constituents.
 - (2) The report shall describe BMPs that are currently being implemented, BMPs that are identified in the SWMP or SWPPP for future implementation, and any additional BMPs that may be added to the SWMP or SWPPP to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the BMPs.
 - (3) Within 30 days of the approval of the report by the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits), the discharger shall revise its ASBS Compliance Plan to incorporate any new or modified BMPs that have been or will be implemented, the implementation schedule, and any additional monitoring required.

- (4) As long as the discharger has complied with the procedures described above and is implementing the revised SWMP or SWPPP, the discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural ocean water quality conditions due to the same constituent.
- (5) The requirements of this section are in addition to the terms, prohibitions, and conditions contained in these Special Protections.

3. Compliance Schedule

- a. On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) are effectively prohibited.
- b. Within eighteen (18) months from the effective date of the Exception, the discharger shall submit a draft written ASBS Compliance Plan to the State Water Board Executive Director (statewide permits) or Regional Water Board Executive Officer (Regional Water Board permits) that describes its strategy to comply with these special conditions, including the requirement to maintain natural water quality in the affected ASBS. The ASBS Compliance Plan shall include a description of appropriate non-structural controls and a time schedule to implement structural controls (implementation schedule) to comply with these special conditions for inclusion in the discharger's SWMP or SWPPP, as appropriate to permit type. The final ASBS Compliance Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring, must be submitted within thirty (30) months from the effective date of the Exception.
- c. Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these special conditions shall be implemented.
- d. Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Compliance Plan that are necessary to comply with these special conditions shall be operational.
- e. Within six (6) years of the effective date of the Exception, all dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the discharger must re-sample the receiving water, pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85th percentile threshold of reference water quality data, and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See attached Flowchart.
- f. The Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may only authorize additional time to comply with the special conditions d. and e., above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

If a discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in d. or e. The notice shall describe

the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. for municipalities, a demonstration of significant hardship to discharger ratepayers, by showing the relationship of storm water fees to annual household income for residents within the discharger's jurisdictional area, and the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or
2. for other governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

B. NONPOINT SOURCE DISCHARGES

1. General Provisions for Nonpoint Sources

- a. Existing nonpoint source waste discharges are allowed into an ASBS only under the following conditions:
 - (1) The discharges are authorized under waste discharge requirements, a conditional waiver of waste discharge requirements, or a conditional prohibition issued by the State Water Board or a Regional Water Board.
 - (2) The discharges are in compliance with the applicable terms, prohibitions, and special conditions contained in these Special Protections.
 - (3) The discharges:
 - (i) Are essential for flood control or slope stability, including roof, landscape, road, and parking lot drainage;
 - (ii) Are designed to prevent soil erosion;
 - (iii) Occur only during wet weather;
 - (iv) Are composed of only storm water runoff.
- b. Discharges composed of storm water runoff shall not alter natural ocean water quality in an ASBS.

- c. The discharge of trash is prohibited.
- d. Only existing nonpoint source waste discharges are allowed. "Existing nonpoint source waste discharges" are discharges that were ongoing prior to January 1, 2005. "New nonpoint source discharges" are defined as those that commenced on or after January 1, 2005. A change to an existing nonpoint source discharge, in terms of relocation or alteration, in order to comply with these special conditions, is allowed and does not constitute a new discharge.
- e. Non-storm water discharges from nonpoint sources (those not subject to an NPDES Permit) are prohibited except as provided below:
 - (1) The term "non-storm water discharges" means any waste discharges that are not composed entirely of storm water.
 - (2) The following non-storm water discharges are allowed, provided that the discharges are essential for emergency response purposes, structural stability, slope stability, or occur naturally:
 - (i) Discharges associated with emergency fire fighting operations.
 - (ii) Foundation and footing drains.
 - (iii) Water from crawl space or basement pumps.
 - (iv) Hillside dewatering.
 - (v) Naturally occurring groundwater seepage via a storm drain.
 - (vi) Non-anthropogenic flows from a naturally occurring stream via a culvert or storm drain, as long as there are no contributions of anthropogenic runoff.
 - (3) Authorized non-storm water discharges shall not cause or contribute to a violation of the water quality objectives in Chapter II of the Ocean Plan nor alter natural ocean water quality in an ASBS.
- f. At the San Clemente Island ASBS, discharges incidental to military training and research, development, test, and evaluation operations are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed in the two military closure areas in the vicinity of Wilson Cove and Castle Rock. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.
- g. At the San Nicolas Island and Begg Rock ASBS, discharges incidental to military research, development, testing, and evaluation of, and training with, guided missile and other weapons systems, fleet training exercises, small-scale amphibious warfare training, and special warfare training are allowed. Discharges incidental to underwater demolition and other in-water explosions are not allowed. Discharges must not result in a violation of the water quality objectives, including the protection of the marine aquatic life beneficial use, anywhere in the ASBS.

h. All other nonpoint source discharges not specifically authorized above are prohibited.

2. Planning and Reporting

a. The nonpoint source discharger shall develop an ASBS Pollution Prevention Plan, including an implementation schedule, to address storm water runoff and any other nonpoint source discharges from its facilities. The ASBS Pollution Prevention Plan must be equivalent in contents to an ASBS Compliance Plan as described in I (A)(2) in this document. The ASBS Pollution Prevention Plan is subject to approval by the Executive Director of the State Water Board (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements).

b. The ASBS Pollution Prevention Plan shall address storm water discharges (wet weather flows) and, in particular, describe how pollutant reductions in storm water runoff that are necessary to comply with these special conditions, will be achieved through Management Measures and associated Management Practices (Management Measures/Practices). Structural BMPs need not be installed if the discharger can document to the satisfaction of the State Water Board Executive Director or Regional Water Board Executive Officer that such installation would pose a threat to health or safety. Management Measures to control storm water runoff during a design storm shall achieve on average the following target levels:

(1) Table B Instantaneous Maximum Water Quality Objectives in Chapter II of the Ocean Plan; or

(2) A 90% reduction in pollutant loading during storm events, for the applicant's total discharges.

The baseline for these determinations is the effective date of the Exception, except for those structural BMPs installed between January 1, 2005 and adoption of these Special Protections, and the reductions must be achieved and documented within six (6) years of the effective date.

c. If the results of the receiving water monitoring described in IV.B. of these special conditions indicate that the storm water runoff or other nonpoint source pollution is causing or contributing to an alteration of natural ocean water quality in the ASBS, the discharger shall submit a report to the State Water Board and the Regional Water Board within 30 days of receiving the results.

(1) The report shall identify the constituents that alter natural water quality and the sources of these constituents.

(2) The report shall describe Management Measures/Practices that are currently being implemented, Management Measures/Practices that are identified in the ASBS Pollution Prevention Plan for future implementation, and any additional Management Measures/Practices that may be added to the Pollution Prevention Plan to address the alteration of natural water quality. The report shall include a new or modified implementation schedule for the Management Measures/Practices.

- (3) Within 30 days of the approval of the report by the State Water Board Executive Director (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements), the discharger shall revise its ASBS Pollution Prevention Plan to incorporate any new or modified Management Measures/Practices that have been or will be implemented, the implementation schedule, and any additional monitoring required.
- (4) As long as the discharger has complied with the procedures described above and is implementing the revised ASBS Pollution Prevention Plan, the discharger does not have to repeat the same procedure for continuing or recurring exceedances of natural water quality conditions due to the same constituent.
- (5) The requirements of this section are in addition to the terms, prohibitions, and conditions contained in these Special Protections.

3. Compliance Schedule

- a. On the effective date of the Exception, all non-authorized non-storm water discharges (e.g., dry weather flow) are effectively prohibited.
- b. Within eighteen (18) months from the effective date of the Exception, the dischargers shall submit a draft written ASBS Pollution Prevention Plan to the State Water Board Executive Director (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements) that describes its strategy to comply with these special conditions, including the requirement to maintain natural ocean water quality in the affected ASBS. The Pollution Prevention Plan shall include a description of appropriate non-structural controls and a time schedule to implement structural controls to comply with these special conditions for inclusion in the discharger's Pollution Prevention Plan. The final ASBS Pollution Prevention Plan, including a description and final schedule for structural controls based on the results of runoff and receiving water monitoring, must be submitted within thirty (30) months from the effective date of the Exception.
- c. Within 18 months of the effective date of the Exception, any non-structural controls that are necessary to comply with these Special Protections shall be implemented.
- d. Within six (6) years of the effective date of the Exception, any structural controls identified in the ASBS Pollution Prevention Plan that are necessary to comply with these special conditions shall be operational.
- e. Within six (6) years of the effective date of the Exception, all dischargers must comply with the requirement that their discharges into the affected ASBS maintain natural ocean water quality. If the initial results of post-storm receiving water quality testing indicate levels higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, then the discharger must re-sample the receiving water pre- and post-storm. If after re-sampling the post-storm levels are still higher than the 85th percentile threshold of reference water quality data and the pre-storm receiving water levels, for any constituent, then natural ocean water quality is exceeded. See attached Flowchart.

- f. The Executive Director of the State Water Board (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements) may only authorize additional time to comply with the special conditions d. and e., above if good cause exists to do so. Good cause means a physical impossibility or lack of funding.

If a discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in d. or e. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality.

The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. a demonstration that the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate; or
2. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

II. ADDITIONAL REQUIREMENTS FOR PARKS AND RECREATION FACILITIES

In addition to the provisions in Section I (A) or I (B), respectively, a discharger with parks and recreation facilities shall comply with the following:

- A. The discharger shall include a section in an ASBS Compliance Plan (for NPDES dischargers) or an ASBS Pollution Prevention Plan (for nonpoint source dischargers) to address storm water runoff from parks and recreation facilities.
1. The plan shall identify all pollutant sources, including sediment sources, which may result in waste entering storm water runoff. Pollutant sources include, but are not limited to, roadside rest areas and vistas, picnic areas, campgrounds, trash receptacles, maintenance facilities, park personnel housing, portable toilets, leach fields, fuel tanks, roads, piers, and boat launch facilities.
 2. The plan shall describe BMPs or Management Measures/Practices that will be implemented to control soil erosion (both temporary and permanent erosion controls) and reduce or eliminate pollutants in storm water runoff in order to achieve and maintain natural water quality conditions in the affected ASBS. The plan shall include BMPs or

Management Measures/Practices to ensure that trails and culverts are maintained to prevent erosion and minimize waste discharges to ASBS.

3. The plan shall include BMPs or Management Measures/Practices to prevent the discharge of pesticides or other chemicals, including agricultural chemicals, in storm water runoff to the affected ASBS.
 4. The plan shall include BMPs or Management Measures/Practices that address public education and outreach. The goal of these BMPs or Management Measures/Practices is to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in these Special Protections. The BMPs or Management Measures/Practices shall include signage at camping, picnicking, beach and roadside parking areas, and visitor centers, or other appropriate measures, which notify the public of any applicable requirements of these Special Protections and identify the ASBS boundaries.
 5. The plan shall include BMPs or Management Measures/Practices that address the prohibition against the discharge of trash to ASBS. The BMPs or Management Measures/Practices shall include measures to ensure that adequate trash receptacles are available for public use at visitor facilities, including parking areas, and that the receptacles are adequately maintained to prevent trash discharges into the ASBS. Appropriate measures include covering trash receptacles to prevent trash from being wind blown and periodically emptying the receptacles to prevent overflows.
 6. The plan shall include BMPs or Management Measures/Practices to address runoff from parking areas and other developed features to ensure that the runoff does not alter natural water quality in the affected ASBS. BMPs or Management Measures/Practices shall include measures to reduce pollutant loading in runoff to the ASBS through installation of natural area buffers (LID), treatment, or other appropriate measures.
- B. Maintenance and repair of park and recreation facilities must not result in waste discharges to the ASBS. The practice of road oiling must be minimized or eliminated, and must not result in waste discharges to the ASBS.

III. ADDITIONAL REQUIREMENTS – WATERFRONT AND MARINE OPERATIONS

In addition to the provisions in Section I (A) or I (B), respectively, a discharger with waterfront and marine operations shall comply with the following:

- A. For discharges related to waterfront and marine operations, the discharger shall develop a Waterfront and Marine Operations Management Plan (Waterfront Plan). This plan shall contain appropriate Management Measures/Practices to address nonpoint source pollutant discharges to the affected ASBS.
 1. The Waterfront Plan shall contain appropriate Management Measures/Practices for any waste discharges associated with the operation and maintenance of vessels, moorings, piers, launch ramps, and cleaning stations in order to ensure that beneficial uses are protected and natural water quality is maintained in the affected ASBS.

2. For discharges from marinas and recreational boating activities, the Waterfront Plan shall include appropriate Management Measures, described in The Plan for California's Nonpoint Source Pollution Control Program, for marinas and recreational boating, or equivalent practices, to ensure that nonpoint source pollutant discharges do not alter natural water quality in the affected ASBS.
 3. The Waterfront Plan shall include Management Practices to address public education and outreach to ensure that the public is adequately informed that waste discharges to the affected ASBS are prohibited or limited by special conditions in these Special Protections. The management practices shall include appropriate signage, or similar measures, to inform the public of the ASBS restrictions and to identify the ASBS boundaries.
 4. The Waterfront Plan shall include Management Practices to address the prohibition against trash discharges to ASBS. The Management Practices shall include the provision of adequate trash receptacles for marine recreation areas, including parking areas, launch ramps, and docks. The plan shall also include appropriate Management Practices to ensure that the receptacles are adequately maintained and secured in order to prevent trash discharges into the ASBS. Appropriate Management Practices include covering the trash receptacles to prevent trash from being windblown, staking or securing the trash receptacles so they don't tip over, and periodically emptying the receptacles to prevent overflow.
 5. The discharger shall submit its Waterfront Plan to the by the State Water Board Executive Director (statewide waivers or waste discharge requirements) or Executive Officer of the Regional Water Board (Regional Water Board waivers or waste discharge requirements) within six months of the effective date of these special conditions. The Waterfront Plan is subject to approval by the State Water Board Executive Director or the Regional Water Board Executive Officer, as appropriate. The plan must be fully implemented within 18 months of the effective date of the Exception.
- B. The discharge of chlorine, soaps, petroleum, other chemical contaminants, trash, fish offal, or human sewage to ASBS is prohibited. Sinks and fish cleaning stations are point source discharges of wastes and are prohibited from discharging into ASBS. Anthropogenic accumulations of discarded fouling organisms on the sea floor must be minimized.
- C. Limited-term activities, such as the repair, renovation, or maintenance of waterfront facilities, including, but not limited to, piers, docks, moorings, and breakwaters, are authorized only in accordance with Chapter III.E.2 of the Ocean Plan.
- D. If the discharger anticipates that the discharger will fail to fully implement the approved Waterfront Plan within the 18 month deadline, the discharger shall submit a technical report as soon as practicable to the State Water Board Executive Director or the Regional Water Board Executive Officer, as appropriate. The technical report shall contain reasons for failing to meet the deadline and propose a revised schedule to fully implement the plan.
- E. The State Water Board or the Regional Water Board may, for good cause, authorize additional time to comply with the Waterfront Plan. Good cause means a physical impossibility or lack of funding.

If a discharger claims physical impossibility, it shall notify the Board in writing within thirty (30) days of the date that the discharger first knew of the event or circumstance that caused or would cause it to fail to meet the deadline in Section III.A.5. The notice shall describe the reason for the noncompliance or anticipated noncompliance and specifically refer to this Section of this Exception. It shall describe the anticipated length of time the delay in compliance may persist, the cause or causes of the delay as well as measures to minimize the impact of the delay on water quality, the measures taken or to be taken by the discharger to prevent or minimize the delay, the schedule by which the measures will be implemented, and the anticipated date of compliance. The discharger shall adopt all reasonable measures to avoid and minimize such delays and their impact on water quality. The discharger may request an extension of time for compliance based on lack of funding. The request for an extension shall require:

1. a demonstration of significant hardship by showing that the discharger has made timely and complete applications for all available bond and grant funding, and either no bond or grant funding is available, or bond and/or grant funding is inadequate.
2. for governmental agencies, a demonstration and documentation of a good faith effort to acquire funding through that agency's budgetary process, and a demonstration that funding was unavailable or inadequate.

IV. MONITORING REQUIREMENTS

Monitoring is mandatory for all dischargers to assure compliance with the Ocean Plan. Monitoring requirements include both: (A) core discharge monitoring, and (B) ocean receiving water monitoring. The State and Regional Water Boards must approve sampling site locations and any adjustments to the monitoring programs. All ocean receiving water and reference area monitoring must be comparable with the Water Boards' Surface Water Ambient Monitoring Program (SWAMP).

Safety concerns: Sample locations and sampling periods must be determined considering safety issues. Sampling may be postponed upon notification to the State and Regional Water Boards if hazardous conditions prevail.

Analytical Chemistry Methods: All constituents must be analyzed using the lowest minimum detection limits comparable to the Ocean Plan water quality objectives. For metal analysis, all samples, including storm water effluent, reference samples, and ocean receiving water samples, must be analyzed by the approved analytical method with the lowest minimum detection limits (currently Inductively Coupled Plasma/Mass Spectrometry) described in the Ocean Plan.

A. CORE DISCHARGE MONITORING PROGRAM

1. General sampling requirements for timing and storm size:

Runoff must be collected during a storm event that is greater than 0.1 inch and generates runoff, and at least 72 hours from the previously measurable storm event. Runoff samples shall be collected during the same storm and at approximately the same time when post-

storm receiving water is sampled, and analyzed for the same constituents as receiving water and reference site samples (see section IV B) as described below.

2. Runoff flow measurements

- a. For municipal/industrial storm water outfalls in existence as of December 31, 2007, 18 inches (457mm) or greater in diameter/width (including multiple outfall pipes in combination having a width of 18 inches, runoff flows must be measured or calculated, using a method acceptable to and approved by the State and Regional Water Boards.
- b. This will be reported annually for each precipitation season to the State and Regional Water Boards.

3. Runoff samples – storm events

- a. For outfalls equal to or greater than 18 inches (0.46m) in diameter or width:
 - (1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination; and
 - (2) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.
 - (3) If an applicant has no outfall greater than 36 inches, then storm water runoff from the applicant's largest outfall shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates).
- b. For outfalls equal to or greater than 36 inches (0.91m) in diameter or width:
 - (1) samples of storm water runoff shall be collected during the same storm as receiving water samples and analyzed for oil and grease, total suspended solids, and, within the range of the southern sea otter indicator bacteria or some other measure of fecal contamination; and
 - (2) samples of storm water runoff shall be further collected during the same storm as receiving water samples and analyzed for Ocean Plan Table B metals for protection of marine life, Ocean Plan polynuclear aromatic hydrocarbons (PAHs), current use pesticides (pyrethroids and OP pesticides), and nutrients (ammonia, nitrate and phosphates); and
 - (3) samples of storm water runoff shall be collected and analyzed for critical life stage chronic toxicity (one invertebrate or algal species) at least once during each storm season when receiving water is sampled in the ASBS.

IV (B)] in addition to (a.) and (b.) above, a minimum of the two largest outfalls or 20 percent of the larger outfalls, whichever is greater, shall be sampled (flow weighted composite samples) at least three times annually during wet weather (storm event) and analyzed for all Ocean Plan Table A constituents, Table B constituents for marine aquatic life protection (except for toxicity, only chronic toxicity for three species shall be required), DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, and Ocean Plan indicator bacteria. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one (the largest) such discharge shall be sampled annually in each Region.

4. The Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may reduce or suspend core monitoring once the storm runoff is fully characterized. This determination may be made at any point after the discharge is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.

B. Ocean Receiving Water and Reference Area Monitoring Program

In addition to performing the Core Discharge Monitoring Program in Section II.A above, all applicants having authorized discharges must perform ocean receiving water monitoring. In order to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS, dischargers may choose either (1) an individual monitoring program, or (2) participation in a regional integrated monitoring program.

1. Individual Monitoring Program: The requirements listed below are for those dischargers who elect to perform an individual monitoring program to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within the affected ASBS. In addition to Core Discharge Monitoring, the following additional monitoring requirements shall be met:
 - a. Three times annually, during wet weather (storm events), the receiving water at the point of discharge from the outfalls described in section (IV)(A)(3)(c) above shall be sampled and analyzed for Ocean Plan Table A constituents, Table B constituents for marine aquatic life, DDT, PCBs, Ocean Plan PAHs, OP pesticides, pyrethroids, nitrates, phosphates, salinity, chronic toxicity (three species), and Ocean Plan indicator bacteria.

The sample location for the ocean receiving water shall be in the surf zone at the point of discharges; this must be at the same location where storm water runoff is sampled. Receiving water shall be sampled prior to (pre-storm) and during (or immediately after) the same storm (post storm). Post storm sampling shall be during the same storm and at approximately the same time as when the runoff is sampled. Reference water quality shall also be sampled three times annually and analyzed for the same constituents pre-storm and post-storm, during the same storm seasons when receiving water is sampled. Reference stations will be determined by the State Water Board's Division of Water Quality and the applicable Regional Water Board(s).

- b. Sediment sampling shall occur at least three times during every five (5) year period. The subtidal sediment (sand or finer, if present) at the discharge shall be sampled and analyzed for Ocean Plan Table B constituents for marine aquatic life, DDT, PCBs, PAHs,

using the amphipod *Eohaustorius estuarius* must be performed.

- c. A quantitative survey of intertidal benthic marine life shall be performed at the discharge and at a reference site. The survey shall be performed at least once every five (5) year period. The survey design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The results of the survey shall be completed and submitted to the State Water Board and Regional Water Board at least six months prior to the end of the permit cycle.
 - d. Once during each five (5) year period, a bioaccumulation study shall be conducted to determine the concentrations of metals and synthetic organic pollutants at representative discharge sites and at representative reference sites. The study design is subject to approval by the Regional Water Board and the State Water Board's Division of Water Quality. The bioaccumulation study may include California mussels (*Mytilus californianus*) and/or sand crabs (*Emerita analoga* or *Blepharipoda occidentalis*). Based on the study results, the Regional Water Board and the State Water Board's Division of Water Quality, may adjust the study design in subsequent permits, or add or modify additional test organisms (such as shore crabs or fish), or modify the study design appropriate for the area and best available sensitive measures of contaminant exposure.
 - e. Marine Debris: Representative quantitative observations for trash by type and source shall be performed along the coast of the ASBS within the influence of the discharger's outfalls. The design, including locations and frequency, of the marine debris observations is subject to approval by the Regional Water Board and State Water Board's Division of Water Quality.
 - f. The monitoring requirements of the Individual Monitoring Program in this section are minimum requirements. After a minimum of one (1) year of continuous water quality monitoring of the discharges and ocean receiving waters, the Executive Director of the State Water Board (statewide permits) or Executive Officer of the Regional Water Board (Regional Water Board permits) may require additional monitoring, or adjust, reduce or suspend receiving water and reference station monitoring. This determination may be made at any point after the discharge and receiving water is fully characterized, but is best made after the monitoring results from the first permit cycle are assessed.
2. Regional Integrated Monitoring Program: Dischargers may elect to participate in a regional integrated monitoring program, in lieu of an individual monitoring program, to fulfill the requirements for monitoring the physical, chemical, and biological characteristics of the ocean receiving waters within their ASBS. This regional approach shall characterize natural water quality, pre- and post-storm, in ocean reference areas near the mouths of identified open space watersheds and the effects of the discharges on natural water quality (physical, chemical, and toxicity) in the ASBS receiving waters, and should include benthic marine aquatic life and bioaccumulation components. The design of the ASBS stratum of a regional integrated monitoring program may deviate from the otherwise prescribed individual monitoring approach (in Section IV.B.1) if approved by the State Water Board's Division of Water Quality and the Regional Water Boards.
 - a. Ocean reference areas shall be located at the drainages of flowing watersheds with minimal development (in no instance more than 10% development), and shall not be located in CWA Section 303(d) listed waterbodies or have tributaries that are 303(d)

listed. Reference areas shall be free of wastewater discharges and anthropogenic non-storm water runoff. A minimum of low threat storm runoff discharges (e.g. stream highway overpasses and campgrounds) may be allowed on a case-by-case basis. Reference areas shall be located in the same region as the ASBS receiving water monitoring occurs. The reference areas for each Region are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean reference water samples must be collected from each station, each from a separate storm during the same storm season that receiving water is sampled. A minimum of one reference location shall be sampled for each ASBS receiving water site sampled per responsible party. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.

- b. ASBS ocean receiving water must be sampled in the surf zone at the location where the runoff makes contact with ocean water (i.e. at "point zero"). Ocean receiving water stations must be representative of worst-case discharge conditions (i.e. co-located at a large drain greater than 36 inches, or if drains greater than 36 inches are not present in the ASBS then the largest drain greater than 18 inches.) Ocean receiving water stations are subject to approval by the participants in the regional monitoring program and the State Water Board's Division of Water Quality and the applicable Regional Water Board(s). A minimum of three ocean receiving water samples must be collected during each storm season from each station, each from a separate storm. A minimum of one receiving water location shall be sampled in each ASBS per responsible party in that ASBS. For parties discharging to ASBS in more than one Regional Water Board region, at a minimum, one reference station and one receiving water station shall be sampled in each region.
 - c. Reference and receiving water sampling shall commence during the first full storm season following the adoption of these special conditions, and post-storm samples shall be collected during the same storm event when storm water runoff is sampled. Sampling shall occur in a minimum of two storm seasons. For those ASBS dischargers that have already participated in the Southern California Bight 2008 ASBS regional monitoring effort, sampling may be limited to only one storm season.
 - d. Receiving water and reference samples shall be analyzed for the same constituents as storm water runoff samples. At a minimum, constituents to be sampled and analyzed in reference and discharge receiving waters must include oil and grease, total suspended solids, Ocean Plan Table B metals for protection of marine life, Ocean Plan PAHs, pyrethroids, OP pesticides, ammonia, nitrate, phosphates, and critical life stage chronic toxicity for three species. In addition, within the range of the southern sea otter, indicator bacteria or some other measure of fecal contamination shall be analyzed.
3. Waterfront and Marine Operations: In addition to the above requirements for ocean receiving water monitoring, additional monitoring must be performed for marinas and boat launch and pier facilities:
- a. For all marina or mooring field operators, in mooring fields with 10 or more occupied moorings, the ocean receiving water must be sampled for Ocean Plan indicator bacteria, residual chlorine, copper, zinc, grease and oil, methylene blue active substances (MBAS), and ammonia nitrogen.

- (1) For mooring field operators opting for an individual monitoring program (Section IV.B.1 above), this sampling must occur weekly (on the weekend) from May through October.
 - (2) For mooring field operators opting to participate in a regional integrated monitoring program (Section IV.B.2 above), this sampling must occur monthly from May through October on a high use weekend in each month. The Water Boards may allow a reduction in the frequency of sampling, through the regional monitoring program, after the first year of monitoring.
- b. For all mooring field operators, the subtidal sediment (sand or finer, if present) within mooring fields and below piers shall be sampled and analyzed for Ocean Plan Table B metals (for marine aquatic life beneficial use), acute toxicity, PAHs, and tributyltin. For sediment toxicity testing, only an acute toxicity test using the amphipod *Eohaustorius estuarius* must be performed. This sampling shall occur at least three times during a five (5) year period. For mooring field operators opting to participate in a regional integrated monitoring program, the Water Boards may allow a reduction in the frequency of sampling after the first sampling effort's results are assessed.

Glossary

At the point of discharge(s) – Means in the surf zone immediately where runoff from an outfall meets the ocean water (a.k.a., at point zero).

Areas of Special Biological Significance (ASBS) – Those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of State Water Quality Protection Areas.

Design storm – For purposes of these Special Protections, a design storm is defined as the volume of runoff produced from one inch of precipitation per day or, if this definition is inconsistent with the discharger’s applicable storm water permit, then the design storm shall be the definition included in the discharger’s applicable storm water permit.

Development – Relevant to reference monitoring sites, means urban, industrial, agricultural, grazing, mining, and timber harvesting land uses.

Higher threat discharges - Permitted storm drains discharging equal to or greater than 18 inches, industrial storm drains, agricultural runoff discharged through an MS4, discharges associated with waterfront and marina operations (e.g., piers, launch ramps, mooring fields, and associated vessel support activities, except for passive discharges defined below), and direct discharges associated with commercial or industrial activities to ASBS.

Low Impact Development (LID) – A sustainable practice that benefits water supply and contributes to water quality protection. Unlike traditional storm water management, which entails collecting and conveying storm water runoff through storm drains, pipes, or other conveyances to a centralized storm water facility, LID focuses on using site design and storm water management to maintain the site’s pre-development runoff rates and volumes. The goal of LID is to mimic a site’s predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall.

Marine Operations – Marinas or mooring fields that contain slips or mooring locations for 10 or more vessels.

Management Measure (MM) - Economically achievable measures for the control of the addition of pollutants from various classes of nonpoint sources of pollution, which reflect the greatest degree of pollutant reduction achievable through the application of the best available nonpoint pollution control practices, technologies, processes, siting criteria, operating methods, or other alternatives. For example, in the “marinas and recreational boating” land-use category specified in the Plan for California’s Nonpoint Source Pollution Control Program (NPS Program Plan) (SWRCB, 1999), “boat cleaning and maintenance” is considered a MM or the source of a specific class or type of NPS pollution.

Management Practice (MP) - The practices (e.g., structural, non-structural, operational, or other alternatives) that can be used either individually or in combination to address a specific MM class or classes of NPS pollution. For example, for the “boat cleaning and maintenance” MM, specific MPs can include, but are not limited to, methods for the selection of environmentally sensitive hull paints or methods for cleaning/removal of hull copper anti-fouling paints.

Municipal Separate Storm Sewer System (MS4) – A municipally-owned storm sewer system regulated under the Phase I or Phase II storm water program implemented in compliance with Clean Water Act section 402(p). Note that an MS4 program’s boundaries are not necessarily congruent with the permittee’s political boundaries.

Natural Ocean Water Quality - The water quality (based on selected physical, chemical and biological characteristics) that is required to sustain marine ecosystems, and which is without apparent human influence, *i.e.*, an absence of significant amounts of: (a) man-made constituents (*e.g.*, DDT); (b) other chemical (*e.g.*, trace metals), physical (temperature/thermal pollution, sediment burial), and biological (*e.g.*, bacteria) constituents at concentrations that have been elevated due to man’s activities above those resulting from the naturally occurring processes that affect the area in question; and (c) non-indigenous biota (*e.g.*, invasive algal bloom species) that have been introduced either deliberately or accidentally by man. Discharges “*shall not alter natural ocean water quality*” as determined by a comparison to the range of constituent concentrations in reference areas agreed upon via the regional monitoring program(s). If monitoring information indicates that *natural ocean water quality* is not maintained, but there is sufficient evidence that a discharge is not contributing to the alteration of natural water quality, then the Regional Water Board may make that determination. In this case, sufficient information must include runoff sample data that has equal or lower concentrations for the range of constituents at the applicable reference area(s).

Nonpoint source – Nonpoint pollution sources generally are sources that do not meet the definition of a point source. Nonpoint source pollution typically results from land runoff, precipitation, atmospheric deposition, agricultural drainage, marine/boating operations or hydrologic modification. Nonpoint sources, for purposes of these Special Protections, include discharges that are not required to be regulated under an NPDES permit.

Non-storm water discharge – Any runoff that is not the result of a precipitation event. This is often referred to as “dry weather flow.”

Non-structural control – A Best Management Practice that involves operational, maintenance, regulatory (*e.g.*, ordinances) or educational activities designed to reduce or eliminate pollutants in runoff, and that are not structural controls (*i.e.* there are no physical structures involved).

Physical impossibility - Means any act of God, war, fire, earthquake, windstorm, flood or natural catastrophe; unexpected and unintended accidents not caused by discharger or its employees’ negligence; civil disturbance, vandalism, sabotage or terrorism; restraint by court order or public authority or agency; or action or non-action by, or inability to obtain the necessary authorizations or approvals from any governmental agency other than the permittee.

Representative sites and monitoring procedures – Are to be proposed by the discharger, with appropriate rationale, and subject to approval by Water Board staff.

Sheet-flow – Runoff that flows across land surfaces at a shallow depth relative to the cross-sectional width of the flow. These types of flow may or may not enter a storm drain system before discharge to receiving waters.

Storm Season – Also referred to as rainy season, means the months of the year from the onset of rainfall during autumn until the cessation of rainfall in the spring.

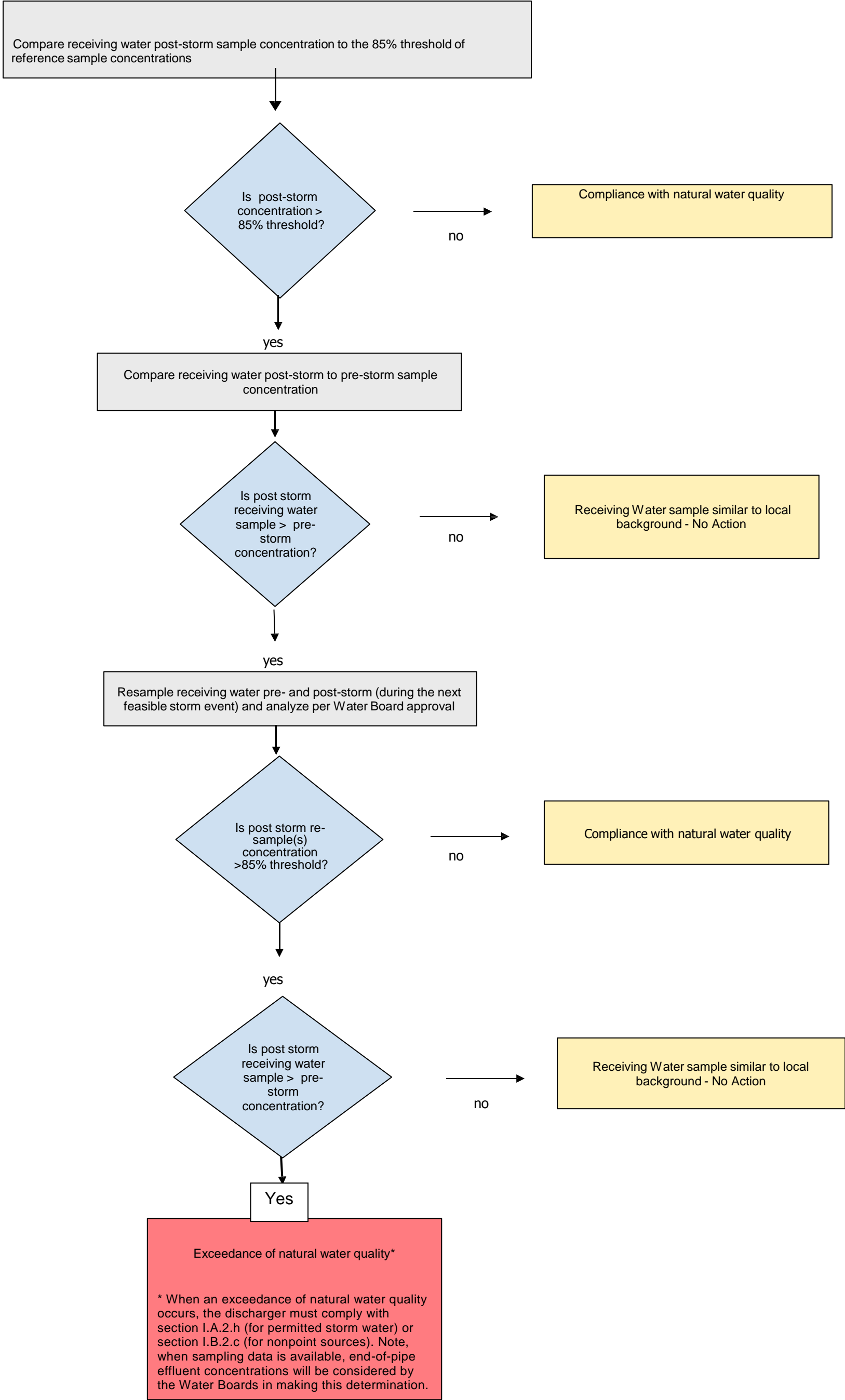
Structural control – A Best Management Practice that involves the installation of engineering solutions to the physical treatment or infiltration of runoff.

Surf Zone - The surf zone is defined as the submerged area between the breaking waves and the shoreline at any one time.

Surface Water Ambient Monitoring Program (SWAMP) comparable – Means that the monitoring program must 1) meet or exceed 2008 SWAMP Quality Assurance Program Management Plan (QAPP) Measurement Quality Objectives, or 2) have a Quality Assurance Project Plan that has been approved by SWAMP; in addition data must be formatted to match the database requirements of the SWAMP Information Management System. Adherence to the measurement quality objectives in the Southern California Bight 2008 ASBS Regional Monitoring Program QAPP and data base management comprises being SWAMP comparable.

Waterfront Operations - Piers, launch ramps, and cleaning stations in the water or on the adjacent shoreline.

**Attachment 1
Special Protections Sections I(A)(3)(e) and I(B)(3)(e)
Flowchart to Determine Compliance with natural Water Quality**



ATTACHMENT G

Standard NPDES Stormwater Permit Provisions

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

**Standard Provisions and Reporting Requirements
for
NPDES Stormwater Discharge Permits**

November 19, 2015

A. GENERAL PROVISIONS

1. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.
2. All discharges authorized by this Order shall be consistent with the terms and conditions of this Order.
3. **Duty to Comply**
 - a. If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act, or amendments thereto, for a toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in a Board adopted Order, discharger must comply with the new standard or prohibition. The Board will revise or modify the Order in accordance with such toxic effluent standard or prohibition and so notify the discharger.
 - b. If more stringent applicable water quality standards are approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the discharger must comply with the new standard. The Board will revise and modify this Order in accordance with such more stringent standards.
 - c. The filing of a request by the discharger for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 CFR 122.41(f)]
4. **Duty to Mitigate**

The discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this order and permit which has a reasonable likelihood of adversely affecting public health or the environment, including such accelerated or additional monitoring as requested by the Board or Executive Officer to determine the nature and impact of the violation. [40 CFR 122.41(d)]
5. Pursuant to U.S. Environmental Protection Agency regulations the discharger must notify the Water Board as soon as it knows or has reason to believe (1) that they have begun or expect to begin, use or manufacture of a pollutant not reported in the permit application,

or (2) a discharge of toxic pollutants not limited by this permit has occurred, or will occur, in concentrations that exceed the limits specified in 40 CFR 122.42(a).

6. The discharge of any radiological, chemical, or biological warfare agent waste is prohibited.
7. All facilities used for transport, treatment, or disposal of wastes shall be adequately protected against overflow or washout as the result of a 100-year frequency flood.
8. Collection, treatment, storage and disposal systems shall be operated in a manner that precludes public contact with wastewater, except where excluding the public is inappropriate, warning signs shall be posted.

9. Property Rights

This Order and Permit does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from liabilities under federal, state or local laws, nor create a vested right for the discharge to continue the waste discharge or guarantee the discharger a capacity right in the receiving water. [40 CFR 122.41(g)]

10. Inspection and Entry

The Board or its authorized representatives shall be allowed:

- a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of the order and permit;
- b. Access to and copy at, reasonable times, any records that must be kept under the conditions of the order and permit;
- c. To inspect at reasonable times any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under the order and permit; and
- d. To photograph, sample, and monitor, at reasonable times for the purpose of assuring compliance with the order and permit or as otherwise authorized by the Clean Water Act, any substances or parameters at any locations. [40 CFR 122.41(i)]

11. Permit Actions

This Order and Permit may be modified, revoked and reissued, or terminated in accordance with applicable State and/or Federal regulations. Cause for taking such action includes, but is not limited to any of the following:

- a. Violation of any term or condition contained in the Order and Permit;
- b. Obtaining the Order and Permit by misrepresentation, or by failure to disclose fully all relevant facts;
- c. Endangerment to public health or environment that can only be regulated to acceptable levels by order and permit modification or termination; and
- d. Any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

12. Duty to Provide Information

The discharger shall furnish, within a reasonable time, any information the Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit. The discharger shall also furnish to the Board, upon request, copies of records required to be kept by its permit. [40 CFR 122.41(h)]

13. Availability

A copy of this permit shall be maintained at the discharge facility and be available at all times to operating personnel.

14. Continuation of Expired Permit

This permit continues in force and effect until a new permit is issued or the Board rescinds the permit. Only those dischargers authorized to discharge under the expiring permit are covered by the continued permit.

B. GENERAL REPORTING REQUIREMENTS

1. Signatory Requirements

a. All reports required by the order and permit and other information requested by the Board or U.S. EPA Region 9 shall be signed by a principal executive officer or ranking elected official of the discharger, or by a duly authorized representative of that person. [40 CFR 122.22(b)]

b. Certification

All reports signed by a duly authorized representative under Provision E.1.a. shall contain the following certification:

"I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." [40 CFR 122.22(d)]

2. Should the discharger discover that it failed to submit any relevant facts or that it submitted incorrect information in any report, it shall promptly submit the missing or correct information. [40 CFR 122.41(l)(8)]

3. False Reporting

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall be subject to enforcement procedures as identified in Section F of these Provisions.

4. Transfers

- a. This permit is not transferable to any person except after notice to the Board. The Board may require modification or revocation and reissuance of the permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.
- b. Transfer of control or ownership of a waste discharge facility under an National Pollutant Discharge Elimination System permit must be preceded by a notice to the Board at least 30 days in advance of the proposed transfer date. The notice must include a written agreement between the existing discharger and proposed discharger containing specific dates for transfer of responsibility, coverage, and liability between them. Whether an order and permit may be transferred without modification or revocation and reissuance is at the discretion of the Board. If order and permit modification or revocation and reissuance is necessary, transfer may be delayed 180 days after the Board's receipt of a complete application for waste discharge requirements and an NPDES permit.

5. Compliance Reporting

a. Planned Changes

The discharger shall file with the Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.

b. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final compliance dates contained in any compliance schedule shall be submitted within 10 working days following each scheduled date unless otherwise specified within this order and permit. If reporting noncompliance, the report shall include a description of the reason for failure to comply, a description and schedule of tasks necessary to achieve compliance and an estimated date for achieving full compliance. A final report shall be submitted within 10 working days of achieving full compliance, documenting full compliance

c. Non-compliance Reporting (Twenty-four hour reporting:)

- i. The discharger shall report any noncompliance that may endanger health or the environment. All pertinent information shall be provided orally within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five working days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

C. ENFORCEMENT

1. The provision contained in this enforcement section shall not act as a limitation on the statutory or regulatory authority of the Board.
2. Any violation of the permit constitutes violation of the California Water Code and regulations adopted hereunder and the provisions of the Clean Water Act, and is the basis for enforcement action, permit termination, permit revocation and reissuance, denial of an application for permit reissuance; or a combination thereof.
3. The Board may impose administrative civil liability, may refer a discharger to the State Attorney General to seek civil monetary penalties, may seek injunctive relief or take other appropriate enforcement action as provided in the California Water Code or federal law for violation of Board orders.
4. It shall not be a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this order and permit.
5. A discharger seeking to establish the occurrence of any upset (See Definitions, G. 24) has the burden of proof. A discharger who wishes to establish the affirmative defense of any upset in an action brought for noncompliance shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:
 - a. an upset occurred and that the Permittee can identify the cause(s) or the upset;
 - b. the permitted facility was being properly operated at the time of the upset;
 - c. the discharger submitted notice of the upset as required in paragraph E.6.d.; and
 - d. the discharger complied with any remedial measures required under A.4.

No determination made before an action for noncompliance, such as during administrative review of claims that noncompliance was caused by an upset, is final administrative action subject to judicial review.

In any enforcement proceeding, the discharger seeking to establish the occurrence of any upset has the burden of proof. [40 CFR 122.41(n)]


D. DEFINITIONS

1. Duly authorized representative is one whose:
 - a. Authorization is made in writing by a principal executive officer or ranking elected official;
 - b. Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as general manager in a partnership, manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
 - c. Written authorization is submitted to the U.S. EPA Region 9. If an authorization becomes no longer accurate because a different individual or position has

responsibility for the overall operation of the facility, a new authorization satisfying the requirements above must be submitted to the Board and U.S. EPA Region 9 prior to or together with any reports, information, or applications to be signed by an authorized representative.

2. Hazardous substance means any substance designated under 40 CFR 116 pursuant to Section 311 of the Clean Water Act.
3. Priority pollutants are those constituents referred to in 40 CFR S122, Appendix D and listed in the U.S. EPA NPDES Application Form 2C, (dated 6/80) Items V-3 through V-9.
4. Storm Water means storm water runoff, snow melt runoff, and surface runoff and drainage. It excludes infiltration and runoff from agricultural land.
5. Toxic pollutant means any pollutant listed as toxic under Section 307(a)(1) of the Clean Water Act or under 40 CFR S401.15.
6. Waste, waste discharge, discharge of waste, and discharge are used interchangeably in this order and permit. The requirements of this order and permit are applicable to the entire volume of water, and the material therein, which is disposed of to surface and ground waters of the State of California.

EXHIBIT 3

 KeyCite Yellow Flag - Negative Treatment
Proposed Legislation

United States Code Annotated
Title 33. Navigation and Navigable Waters (Refs & Annos)
Chapter 26. Water Pollution Prevention and Control (Refs & Annos)
Subchapter IV. Permits and Licenses (Refs & Annos)

33 U.S.C.A. § 1342

§ 1342. National pollutant discharge elimination system

Effective: February 7, 2014

[Currentness](#)

(a) Permits for discharge of pollutants

(1) Except as provided in [sections 1328](#) and [1344](#) of this title, the Administrator may, after opportunity for public hearing issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding [section 1311\(a\)](#) of this title, upon condition that such discharge will meet either (A) all applicable requirements under [sections 1311](#), [1312](#), [1316](#), [1317](#), [1318](#), and [1343](#) of this title, or (B) prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this chapter.

(2) The Administrator shall prescribe conditions for such permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate.

(3) The permit program of the Administrator under paragraph (1) of this subsection, and permits issued thereunder, shall be subject to the same terms, conditions, and requirements as apply to a State permit program and permits issued thereunder under subsection (b) of this section.

(4) All permits for discharges into the navigable waters issued pursuant to [section 407](#) of this title shall be deemed to be permits issued under this subchapter, and permits issued under this subchapter shall be deemed to be permits issued under [section 407](#) of this title, and shall continue in force and effect for their term unless revoked, modified, or suspended in accordance with the provisions of this chapter.

(5) No permit for a discharge into the navigable waters shall be issued under [section 407](#) of this title after October 18, 1972. Each application for a permit under [section 407](#) of this title, pending on October 18, 1972, shall be deemed to be an application for a permit under this section. The Administrator shall authorize a State, which he determines has the capability of administering a permit program which will carry out the objectives of this chapter to issue permits for discharges into the navigable waters within the jurisdiction of such State. The Administrator may exercise the authority granted him by the preceding sentence only during the period which begins on October 18, 1972, and ends either on the ninetieth day after the date of the first promulgation of guidelines required by [section 1314\(i\)\(2\)](#) of this title, or the date of approval by the Administrator of a permit program for such State under subsection (b) of this section, whichever date first occurs, and no such authorization to a State shall extend beyond the last day of such period. Each such permit shall

be subject to such conditions as the Administrator determines are necessary to carry out the provisions of this chapter. No such permit shall issue if the Administrator objects to such issuance.

(b) State permit programs

At any time after the promulgation of the guidelines required by [subsection \(i\)\(2\) of section 1314](#) of this title, the Governor of each State desiring to administer its own permit program for discharges into navigable waters within its jurisdiction may submit to the Administrator a full and complete description of the program it proposes to establish and administer under State law or under an interstate compact. In addition, such State shall submit a statement from the attorney general (or the attorney for those State water pollution control agencies which have independent legal counsel), or from the chief legal officer in the case of an interstate agency, that the laws of such State, or the interstate compact, as the case may be, provide adequate authority to carry out the described program. The Administrator shall approve each submitted program unless he determines that adequate authority does not exist:

(1) To issue permits which--

(A) apply, and insure compliance with, any applicable requirements of [sections 1311, 1312, 1316, 1317, and 1343](#) of this title;

(B) are for fixed terms not exceeding five years; and

(C) can be terminated or modified for cause including, but not limited to, the following:

(i) violation of any condition of the permit;

(ii) obtaining a permit by misrepresentation, or failure to disclose fully all relevant facts;

(iii) change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

(D) control the disposal of pollutants into wells;

(2)(A) To issue permits which apply, and insure compliance with, all applicable requirements of [section 1318](#) of this title; or

(B) To inspect, monitor, enter, and require reports to at least the same extent as required in [section 1318](#) of this title;

(3) To insure that the public, and any other State the waters of which may be affected, receive notice of each application for a permit and to provide an opportunity for public hearing before a ruling on each such application;

(4) To insure that the Administrator receives notice of each application (including a copy thereof) for a permit;

(5) To insure that any State (other than the permitting State), whose waters may be affected by the issuance of a permit may submit written recommendations to the permitting State (and the Administrator) with respect to any permit application and, if any part of such written recommendations are not accepted by the permitting State, that the permitting State will notify such affected State (and the Administrator) in writing of its failure to so accept such recommendations together with its reasons for so doing;

(6) To insure that no permit will be issued if, in the judgment of the Secretary of the Army acting through the Chief of Engineers, after consultation with the Secretary of the department in which the Coast Guard is operating, anchorage and navigation of any of the navigable waters would be substantially impaired thereby;

(7) To abate violations of the permit or the permit program, including civil and criminal penalties and other ways and means of enforcement;

(8) To insure that any permit for a discharge from a publicly owned treatment works includes conditions to require the identification in terms of character and volume of pollutants of any significant source introducing pollutants subject to pretreatment standards under [section 1317\(b\)](#) of this title into such works and a program to assure compliance with such pretreatment standards by each such source, in addition to adequate notice to the permitting agency of (A) new introductions into such works of pollutants from any source which would be a new source as defined in [section 1316](#) of this title if such source were discharging pollutants, (B) new introductions of pollutants into such works from a source which would be subject to [section 1311](#) of this title if it were discharging such pollutants, or (C) a substantial change in volume or character of pollutants being introduced into such works by a source introducing pollutants into such works at the time of issuance of the permit. Such notice shall include information on the quality and quantity of effluent to be introduced into such treatment works and any anticipated impact of such change in the quantity or quality of effluent to be discharged from such publicly owned treatment works; and

(9) To insure that any industrial user of any publicly owned treatment works will comply with [sections 1284\(b\)](#), [1317](#), and [1318](#) of this title.

(c) Suspension of Federal program upon submission of State program; withdrawal of approval of State program; return of State program to Administrator

(1) Not later than ninety days after the date on which a State has submitted a program (or revision thereof) pursuant to subsection (b) of this section, the Administrator shall suspend the issuance of permits under subsection (a) of this section as to those discharges subject to such program unless he determines that the State permit program does not meet the requirements of subsection (b) of this section or does not conform to the guidelines issued under [section 1314\(i\)\(2\)](#) of this title. If the Administrator so determines, he shall notify the State of any revisions or modifications necessary to conform to such requirements or guidelines.

(2) Any State permit program under this section shall at all times be in accordance with this section and guidelines promulgated pursuant to [section 1314\(i\)\(2\)](#) of this title.

(3) Whenever the Administrator determines after public hearing that a State is not administering a program approved under this section in accordance with requirements of this section, he shall so notify the State and, if appropriate corrective action is not taken within a reasonable time, not to exceed ninety days, the Administrator shall withdraw approval of such program. The Administrator shall not withdraw approval of any such program unless he shall first have notified the State, and made public, in writing, the reasons for such withdrawal.

(4) Limitations on partial permit program returns and withdrawals

A State may return to the Administrator administration, and the Administrator may withdraw under paragraph (3) of this subsection approval, of--

(A) a State partial permit program approved under subsection (n)(3) only if the entire permit program being administered by the State department or agency at the time is returned or withdrawn; and

(B) a State partial permit program approved under subsection (n)(4) only if an entire phased component of the permit program being administered by the State at the time is returned or withdrawn.

(d) Notification of Administrator

(1) Each State shall transmit to the Administrator a copy of each permit application received by such State and provide notice to the Administrator of every action related to the consideration of such permit application, including each permit proposed to be issued by such State.

(2) No permit shall issue (A) if the Administrator within ninety days of the date of his notification under subsection (b)(5) of this section objects in writing to the issuance of such permit, or (B) if the Administrator within ninety days of the date of transmittal of the proposed permit by the State objects in writing to the issuance of such permit as being outside the guidelines and requirements of this chapter. Whenever the Administrator objects to the issuance of a permit under this paragraph such written objection shall contain a statement of the reasons for such objection and the effluent limitations and conditions which such permit would include if it were issued by the Administrator.

(3) The Administrator may, as to any permit application, waive paragraph (2) of this subsection.

(4) In any case where, after December 27, 1977, the Administrator, pursuant to paragraph (2) of this subsection, objects to the issuance of a permit, on request of the State, a public hearing shall be held by the Administrator on such objection. If the State does not resubmit such permit revised to meet such objection within 30 days after completion of the hearing, or, if no hearing is requested within 90 days after the date of such objection, the Administrator may issue the permit pursuant to subsection (a) of this section for such source in accordance with the guidelines and requirements of this chapter.

(e) Waiver of notification requirement

In accordance with guidelines promulgated pursuant to [subsection \(i\)\(2\) of section 1314](#) of this title, the Administrator is authorized to waive the requirements of subsection (d) of this section at the time he approves a program pursuant to

subsection (b) of this section for any category (including any class, type, or size within such category) of point sources within the State submitting such program.

(f) Point source categories

The Administrator shall promulgate regulations establishing categories of point sources which he determines shall not be subject to the requirements of subsection (d) of this section in any State with a program approved pursuant to subsection (b) of this section. The Administrator may distinguish among classes, types, and sizes within any category of point sources.

(g) Other regulations for safe transportation, handling, carriage, storage, and stowage of pollutants

Any permit issued under this section for the discharge of pollutants into the navigable waters from a vessel or other floating craft shall be subject to any applicable regulations promulgated by the Secretary of the department in which the Coast Guard is operating, establishing specifications for safe transportation, handling, carriage, storage, and stowage of pollutants.

(h) Violation of permit conditions; restriction or prohibition upon introduction of pollutant by source not previously utilizing treatment works

In the event any condition of a permit for discharges from a treatment works (as defined in [section 1292](#) of this title) which is publicly owned is violated, a State with a program approved under subsection (b) of this section or the Administrator, where no State program is approved or where the Administrator determines pursuant to [section 1319\(a\)](#) of this title that a State with an approved program has not commenced appropriate enforcement action with respect to such permit, may proceed in a court of competent jurisdiction to restrict or prohibit the introduction of any pollutant into such treatment works by a source not utilizing such treatment works prior to the finding that such condition was violated.

(i) Federal enforcement not limited

Nothing in this section shall be construed to limit the authority of the Administrator to take action pursuant to [section 1319](#) of this title.

(j) Public information

A copy of each permit application and each permit issued under this section shall be available to the public. Such permit application or permit, or portion thereof, shall further be available on request for the purpose of reproduction.

(k) Compliance with permits

Compliance with a permit issued pursuant to this section shall be deemed compliance, for purposes of [sections 1319](#) and [1365](#) of this title, with [sections 1311](#), [1312](#), [1316](#), [1317](#), and [1343](#) of this title, except any standard imposed under [section 1317](#) of this title for a toxic pollutant injurious to human health. Until December 31, 1974, in any case where a permit for discharge has been applied for pursuant to this section, but final administrative disposition of such application has not been made, such discharge shall not be a violation of (1) [section 1311](#), [1316](#), or [1342](#) of this title, or (2) [section 407](#) of this title, unless the Administrator or other plaintiff proves that final administrative disposition of such application

has not been made because of the failure of the applicant to furnish information reasonably required or requested in order to process the application. For the 180-day period beginning on October 18, 1972, in the case of any point source discharging any pollutant or combination of pollutants immediately prior to such date which source is not subject to [section 407](#) of this title, the discharge by such source shall not be a violation of this chapter if such a source applies for a permit for discharge pursuant to this section within such 180-day period.

(l) Limitation on permit requirement

(1) Agricultural return flows

The Administrator shall not require a permit under this section for discharges composed entirely of return flows from irrigated agriculture, nor shall the Administrator directly or indirectly, require any State to require such a permit.

(2) Stormwater runoff from oil, gas, and mining operations

The Administrator shall not require a permit under this section, nor shall the Administrator directly or indirectly require any State to require a permit, for discharges of stormwater runoff from mining operations or oil and gas exploration, production, processing, or treatment operations or transmission facilities, composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with, or do not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct, or waste products located on the site of such operations.

(3) Silvicultural activities

(A) NPDES permit requirements for silvicultural activities

The Administrator shall not require a permit under this section nor directly or indirectly require any State to require a permit under this section for a discharge from runoff resulting from the conduct of the following silviculture activities conducted in accordance with standard industry practice: nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance.

(B) Other requirements

Nothing in this paragraph exempts a discharge from silvicultural activity from any permitting requirement under [section 1344](#) of this title, existing permitting requirements under section 1342 of this title, or from any other federal law.

(C) The authorization provided in Section ¹ 1365(a) of this title does not apply to any non-permitting program established under 1342(p)(6) ² of this title for the silviculture activities listed in 1342(l)(3)(A) ³ of this title, or to any other limitations that might be deemed to apply to the silviculture activities listed in 1342(l)(3)(A) ³ of this title.

(m) Additional pretreatment of conventional pollutants not required

To the extent a treatment works (as defined in [section 1292](#) of this title) which is publicly owned is not meeting the requirements of a permit issued under this section for such treatment works as a result of inadequate design or operation of such treatment works, the Administrator, in issuing a permit under this section, shall not require pretreatment by a person introducing conventional pollutants identified pursuant to [section 1314\(a\)\(4\)](#) of this title into such treatment works other than pretreatment required to assure compliance with pretreatment standards under subsection (b)(8) of this section and [section 1317\(b\)\(1\)](#) of this title. Nothing in this subsection shall affect the Administrator's authority under [sections 1317](#) and [1319](#) of this title, affect State and local authority under [sections 1317\(b\)\(4\)](#) and [1370](#) of this title, relieve such treatment works of its obligations to meet requirements established under this chapter, or otherwise preclude such works from pursuing whatever feasible options are available to meet its responsibility to comply with its permit under this section.

(n) Partial permit program

(1) State submission

The Governor of a State may submit under subsection (b) of this section a permit program for a portion of the discharges into the navigable waters in such State.

(2) Minimum coverage

A partial permit program under this subsection shall cover, at a minimum, administration of a major category of the discharges into the navigable waters of the State or a major component of the permit program required by subsection (b).

(3) Approval of major category partial permit programs

The Administrator may approve a partial permit program covering administration of a major category of discharges under this subsection if--

(A) such program represents a complete permit program and covers all of the discharges under the jurisdiction of a department or agency of the State; and

(B) the Administrator determines that the partial program represents a significant and identifiable part of the State program required by subsection (b).

(4) Approval of major component partial permit programs

The Administrator may approve under this subsection a partial and phased permit program covering administration of a major component (including discharge categories) of a State permit program required by subsection (b) if--

(A) the Administrator determines that the partial program represents a significant and identifiable part of the State program required by subsection (b); and

(B) the State submits, and the Administrator approves, a plan for the State to assume administration by phases of the remainder of the State program required by subsection (b) by a specified date not more than 5 years after submission of the partial program under this subsection and agrees to make all reasonable efforts to assume such administration by such date.

(o) Anti-backsliding

(1) General prohibition

In the case of effluent limitations established on the basis of subsection (a)(1)(B) of this section, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under [section 1314\(b\)](#) of this title subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit. In the case of effluent limitations established on the basis of [section 1311\(b\)\(1\)\(C\)](#) or [section 1313\(d\)](#) or (e) of this title, a permit may not be renewed, reissued, or modified to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit except in compliance with [section 1313\(d\)\(4\)](#) of this title.

(2) Exceptions

A permit with respect to which paragraph (1) applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant if--

(A) material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation;

(B)(i) information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance; or

(ii) the Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under subsection (a)(1)(B);

(C) a less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy;

(D) the permittee has received a permit modification under [section 1311\(c\)](#), [1311\(g\)](#), [1311\(h\)](#), [1311\(i\)](#), [1311\(k\)](#), [1311\(n\)](#), or [1326\(a\)](#) of this title; or

(E) the permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit and has properly operated and maintained the facilities but has nevertheless been unable to achieve the previous effluent limitations, in which case the limitations in the reviewed, reissued, or modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification).

Subparagraph (B) shall not apply to any revised waste load allocations or any alternative grounds for translating water quality standards into effluent limitations, except where the cumulative effect of such revised allocations results in a decrease in the amount of pollutants discharged into the concerned waters, and such revised allocations are not the result of a discharger eliminating or substantially reducing its discharge of pollutants due to complying with the requirements of this chapter or for reasons otherwise unrelated to water quality.

(3) Limitations

In no event may a permit with respect to which paragraph (1) applies be renewed, reissued, or modified to contain an effluent limitation which is less stringent than required by effluent guidelines in effect at the time the permit is renewed, reissued, or modified. In no event may such a permit to discharge into waters be renewed, reissued, or modified to contain a less stringent effluent limitation if the implementation of such limitation would result in a violation of a water quality standard under [section 1313](#) of this title applicable to such waters.

(p) Municipal and industrial stormwater discharges

(1) General rule

Prior to October 1, 1994, the Administrator or the State (in the case of a permit program approved under this section) shall not require a permit under this section for discharges composed entirely of stormwater.

(2) Exceptions

Paragraph (1) shall not apply with respect to the following stormwater discharges:

(A) A discharge with respect to which a permit has been issued under this section before February 4, 1987.

(B) A discharge associated with industrial activity.

(C) A discharge from a municipal separate storm sewer system serving a population of 250,000 or more.

(D) A discharge from a municipal separate storm sewer system serving a population of 100,000 or more but less than 250,000.

(E) A discharge for which the Administrator or the State, as the case may be, determines that the stormwater discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(3) Permit requirements

(A) Industrial discharges

Permits for discharges associated with industrial activity shall meet all applicable provisions of this section and [section 1311](#) of this title.

(B) Municipal discharge

Permits for discharges from municipal storm sewers--

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

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

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

(4) Permit application requirements

(A) Industrial and large municipal discharges

Not later than 2 years after February 4, 1987, the Administrator shall establish regulations setting forth the permit application requirements for stormwater discharges described in paragraphs (2)(B) and (2)(C). Applications for permits for such discharges shall be filed no later than 3 years after February 4, 1987. Not later than 4 years after February 4, 1987, the Administrator or the State, as the case may be, shall issue or deny each such permit. Any such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit.

(B) Other municipal discharges

Not later than 4 years after February 4, 1987, the Administrator shall establish regulations setting forth the permit application requirements for stormwater discharges described in paragraph (2)(D). Applications for permits for such discharges shall be filed no later than 5 years after February 4, 1987. Not later than 6 years after February 4, 1987, the Administrator or the State, as the case may be, shall issue or deny each such permit. Any such permit shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the date of issuance of such permit.

(5) Studies

The Administrator, in consultation with the States, shall conduct a study for the purposes of--

(A) identifying those stormwater discharges or classes of stormwater discharges for which permits are not required pursuant to paragraphs (1) and (2) of this subsection;

(B) determining, to the maximum extent practicable, the nature and extent of pollutants in such discharges; and

(C) establishing procedures and methods to control stormwater discharges to the extent necessary to mitigate impacts on water quality.

Not later than October 1, 1988, the Administrator shall submit to Congress a report on the results of the study described in subparagraphs (A) and (B). Not later than October 1, 1989, the Administrator shall submit to Congress a report on the results of the study described in subparagraph (C).

(6) Regulations

Not later than October 1, 1993, the Administrator, in consultation with State and local officials, shall issue regulations (based on the results of the studies conducted under paragraph (5)) which designate stormwater discharges, other than those discharges described in paragraph (2), to be regulated to protect water quality and shall establish a comprehensive program to regulate such designated sources. The program shall, at a minimum, (A) establish priorities, (B) establish requirements for State stormwater management programs, and (C) establish expeditious deadlines. The program may include performance standards, guidelines, guidance, and management practices and treatment requirements, as appropriate.

(q) Combined sewer overflows

(1) Requirement for permits, orders, and decrees

Each permit, order, or decree issued pursuant to this chapter after December 21, 2000, for a discharge from a municipal combined storm and sanitary sewer shall conform to the Combined Sewer Overflow Control Policy signed by the Administrator on April 11, 1994 (in this subsection referred to as the “CSO control policy”).

(2) Water quality and designated use review guidance

Not later than July 31, 2001, and after providing notice and opportunity for public comment, the Administrator shall issue guidance to facilitate the conduct of water quality and designated use reviews for municipal combined sewer overflow receiving waters.

(3) Report

Not later than September 1, 2001, the Administrator shall transmit to Congress a report on the progress made by the Environmental Protection Agency, States, and municipalities in implementing and enforcing the CSO control policy.

(r) Discharges incidental to the normal operation of recreational vessels

No permit shall be required under this chapter by the Administrator (or a State, in the case of a permit program approved under subsection (b)) for the discharge of any graywater, bilge water, cooling water, weather deck runoff, oil water separator effluent, or effluent from properly functioning marine engines, or any other discharge that is incidental to the normal operation of a vessel, if the discharge is from a recreational vessel.

CREDIT(S)

(June 30, 1948, c. 758, Title IV, § 402, as added Pub.L. 92-500, § 2, Oct. 18, 1972, 86 Stat. 880; amended [Pub.L. 95-217](#), §§ 33(c), 50, 54(c)(1), 65, 66, Dec. 27, 1977, 91 Stat. 1577, 1588, 1591, 1599, 1600; [Pub.L. 100-4](#), Title IV, §§ 401 to 404(a), (c), formerly (d), 405, Feb. 4, 1987, 101 Stat. 65 to 67, 69; [Pub.L. 102-580](#), Title III, § 364, Oct. 31, 1992, 106 Stat. 4862; [Pub.L. 104-66](#), Title II, § 2021(e)(2), Dec. 21, 1995, 109 Stat. 727; [Pub.L. 106-554](#), § 1(a)(4) [Div. B, Title I, § 112(a)], Dec. 21, 2000, 114 Stat. 2763, 2763A-224; [Pub.L. 110-288](#), § 2, July 29, 2008, 122 Stat. 2650; [Pub.L. 113-79](#), Title XII, § 12313, Feb. 7, 2014, 128 Stat. 992.)

[Notes of Decisions \(238\)](#)

Footnotes

- 1 So in original. Probably should not be capitalized.
- 2 So in original. Probably should read “section 1342(p)(6)”.
- 3 So in original. Probably should read “section 1342(l)(3)(A)”.

33 U.S.C.A. § 1342, 33 USCA § 1342

Current through P.L. 115-40.

United States Code Annotated

Title 33. Navigation and Navigable Waters (Refs & Annos)

Chapter 26. Water Pollution Prevention and Control (Refs & Annos)

Subchapter V. General Provisions

33 U.S.C.A. § 1371

§ 1371. Authority under other laws and regulations

Currentness

(a) Impairment of authority or functions of officials and agencies; treaty provisions

This chapter shall not be construed as (1) limiting the authority or functions of any officer or agency of the United States under any other law or regulation not inconsistent with this chapter; (2) affecting or impairing the authority of the Secretary of the Army (A) to maintain navigation or (B) under the Act of March 3, 1899, (30 Stat. 1112); except that any permit issued under [section 1344](#) of this title shall be conclusive as to the effect on water quality of any discharge resulting from any activity subject to [section 403](#) of this title, or (3) affecting or impairing the provisions of any treaty of the United States.

(b) Discharges of pollutants into navigable waters

Discharges of pollutants into the navigable waters subject to the Rivers and Harbors Act of 1910 (36 Stat. 593; [33 U.S.C. 421](#)) and the Supervisory Harbors Act of 1888 (25 Stat. 209; [33 U.S.C. 441-451b](#)) shall be regulated pursuant to this chapter, and not subject to such Act of 1910 and the Act of 1888 except as to effect on navigation and anchorage.

(c) Action of the Administrator deemed major Federal action; construction of the National Environmental Policy Act of 1969

(1) Except for the provision of Federal financial assistance for the purpose of assisting the construction of publicly owned treatment works as authorized by [section 1281](#) of this title, and the issuance of a permit under [section 1342](#) of this title for the discharge of any pollutant by a new source as defined in [section 1316](#) of this title, no action of the Administrator taken pursuant to this chapter shall be deemed a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act of 1969 (83 Stat. 852) [[42 U.S.C.A. § 4321 et seq.](#)]; and

(2) Nothing in the National Environmental Policy Act of 1969 (83 Stat. 852) shall be deemed to--

(A) authorize any Federal agency authorized to license or permit the conduct of any activity which may result in the discharge of a pollutant into the navigable waters to review any effluent limitation or other requirement established pursuant to this chapter or the adequacy of any certification under [section 1341](#) of this title; or

(B) authorize any such agency to impose, as a condition precedent to the issuance of any license or permit, any effluent limitation other than any such limitation established pursuant to this chapter.

(d) Consideration of international water pollution control agreements

Notwithstanding this chapter or any other provision of law, the Administrator (1) shall not require any State to consider in the development of the ranking in order of priority of needs for the construction of treatment works (as defined in subchapter II of this chapter), any water pollution control agreement which may have been entered into between the United States and any other nation, and (2) shall not consider any such agreement in the approval of any such priority ranking.

CREDIT(S)

(June 30, 1948, c. 758, Title V, § 511, as added Pub.L. 92-500, § 2, Oct. 18, 1972, 86 Stat. 893; amended [Pub.L. 93-243](#), § 3, Jan. 2, 1974, 87 Stat. 1069.)

[Notes of Decisions \(12\)](#)

33 U.S.C.A. § 1371, 33 USCA § 1371

Current through P.L. 115-40.

End of Document

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KeyCite Yellow Flag - Negative Treatment

Distinguished by [Pennsylvania Federation of Sportsmen's Clubs, Inc. v. Hess](#), 3rd Cir.(Pa.), July 24, 2002

112 S.Ct. 1046

Supreme Court of the United States

ARKANSAS, et al., Petitioners,

v.

OKLAHOMA et al.

ENVIRONMENTAL PROTECTION

AGENCY, Petitioner,

v.

OKLAHOMA et al.

Nos. 90–1262, 90–1266.

|
Argued Dec. 11, 1991.|
Decided Feb. 26, 1992.

Consolidated appeals were taken from the Environmental Protection Agency's (EPA) issuance to Arkansas city of discharge permit pursuant to National Pollutant Discharge Elimination System (NPDES) of the Clean Water Act. The Court of Appeals for the Tenth Circuit, [908 F.2d 595](#), found that the Clean Water Act did not allow permit to be issued. Certiorari was granted. The Supreme Court, Justice [Stevens](#), held that: (1) the Clean Water Act authorized the EPA's issuance of an NPDES permit to allow an Arkansas sewage treatment plant to discharge effluent into Illinois River which ultimately reached Oklahoma, and (2) EPA's interpretation of Oklahoma's water quality standards was entitled to substantial deference.

Reversed.

Opinion on remand, [962 F.2d 996](#).

West Headnotes (16)

[1] Environmental Law

[Concurrent and Conflicting Statutes or Regulations](#)

Environmental Law [Federal preemption](#)**Nuisance**

[Nature and elements of public nuisance in general](#)

States

[Environment;nuclear projects](#)

In cases involving controversies between state which introduces pollutants to waterway and downstream state which objects, federal common law of nuisance and affected state's common law are preempted; only state law applicable to interstate discharge is law of state in which point source is located. Federal Water Pollution Control Act Amendments of 1972, §§ 402(b), 510, as amended, [33 U.S.C.A. §§ 1342\(b\), 1370](#).

[6 Cases that cite this headnote](#)

[2] Environmental Law

[Permit and certification proceedings](#)

States which are affected by another state's discharge of effluent into a waterway may not block issuance of discharge permit but must apply to Environmental Protection Agency (EPA) administrator, who has discretion to disapprove permit if he concludes that discharges will have undue impact on interstate waters. Federal Water Pollution Control Act Amendments of 1972, §§ 402(b), 510, as amended, [33 U.S.C.A. §§ 1342\(b\), 1370](#).

[3 Cases that cite this headnote](#)

[3] Environmental Law

[Discharge of pollutants](#)

Clean Water Act requires that permits issued by Environmental Protection Agency (EPA) allowing discharge of effluent into interstate waterway comply with requirements for permit issued under approved state plan and with section of Clean Water Act which appears to prohibit issuance of federal permit over objection of affected state unless compliance with affected state's water quality requirements can be insured. Federal Water Pollution Control Act Amendments of 1972,

§§ 401(a), (a)(2), 402, 402(a), (a)(3), (b), (d)(2), as amended, 33 U.S.C.A. §§ 1341(a), (a)(2), 1342, 1342(a), (a)(3), (b), (d)(2).

[20 Cases that cite this headnote](#)

[4] Environmental Law

🔑 Conditions and limitations

Environmental Protection Agency (EPA) requirement for National Pollution Discharge Elimination System (NPDES) permit that discharge of effluent from Arkansas sewage treatment plant comply with Oklahoma's water quality standards was reasonable exercise of agency's statutory discretion; discharge into Illinois River would travel through Arkansas and over Oklahoma border. Federal Water Pollution Control Act Amendments of 1972, §§ 401(a), 402(a, b), as amended, 33 U.S.C.A. §§ 1341(a), 1342(a, b).

[31 Cases that cite this headnote](#)

[5] Environmental Law

🔑 Interstate pollution

Even if Clean Water Act itself did not require that discharge of effluent from one state comply with water quality standards of another, statute did not limit Environmental Protection Agency's (EPA) authority to mandate that compliance. Federal Water Pollution Control Act Amendments of 1972, §§ 401(a), 402(a, b), as amended, 33 U.S.C.A. §§ 1341(a), 1342(a, b).

[20 Cases that cite this headnote](#)

[6] Environmental Law

🔑 Conditions and limitations

Environmental Protection Agency (EPA) regulations, which provide that National Pollution Discharge Elimination System (NPDES) permit may not be issued if the imposition of conditions would not insure compliance with the applicable water quality requirements of all affected states, were a reasonable exercise of EPA's authority. Federal Water Pollution Control

Act Amendments of 1972, §§ 101(a), 301(b)(1)(C), 402(a)(1, 2), (b), (d)(2), as amended, 33 U.S.C.A. §§ 1251(a), 1311(b)(1)(C), 1342(a)(1, 2), (b), (d)(2).

[32 Cases that cite this headnote](#)

[7] Environmental Law

🔑 Interstate pollution

Placing limits on affected state's direct participation in permitting decision concerning the granting of NPDES permit to discharge effluent into interstate waterways did not constrain Environmental Protection Agency's (EPA) authority to require that point source comply with downstream water quality standards. Federal Water Pollution Control Act Amendments of 1972, §§ 101(a), 301(b)(1)(C), 402(a)(1, 2), (b), (d)(2), as amended, 33 U.S.C.A. §§ 1251(a), 1311(b)(1)(C), 1342(a)(1, 2), (b), (d)(2).

[28 Cases that cite this headnote](#)

[8] Environmental Law

🔑 Interstate pollution

Environmental Protection Agency's (EPA) requirement that discharge of effluent from Arkansas sewage treatment plant into Illinois River basin must comply with Oklahoma's water quality standards was reasonable exercise of agency's substantial statutory discretion. Federal Water Pollution Control Act Amendments of 1972, §§ 101(a), 301(b)(1)(C), 402(a)(1, 2), (b), (d)(2), as amended, 33 U.S.C.A. §§ 1251(a), 1311(b)(1)(C), 1342(a)(1, 2), (b), (d)(2).

[8 Cases that cite this headnote](#)

[9] Environmental Law

🔑 Water Quality Standards or Plans

Clean Water Act does not prohibit any discharge of effluent that would reach waters already in violation of existing water quality standards; nothing in Act mandates complete ban, but rather vests in Environmental Protection Agency (EPA) and states broad

authority to develop long-range, area-wide programs to alleviate and eliminate existing pollution. Federal Water Pollution Control Act Amendments of 1972, § 402(h), as amended, 33 U.S.C.A. § 1342(h).

[10 Cases that cite this headnote](#)

[10] Environmental Law

🔑 [Water pollution](#)

Court of Appeals exceeded legitimate scope of judicial review of agency adjudication by finding that Environmental Protection Agency (EPA) had misinterpreted Oklahoma law with regard to discharge of effluent into interstate waterway Court of Appeals substituted its own reading of the law for EPA's and thus failed to give required substantial deference to agency's reasonable interpretation. Federal Water Pollution Control Act Amendments of 1972, §§ 208(b)(2), 301(b)(1)(C), 303(d), 402(h), as amended, 33 U.S.C.A. §§ 1288(b)(2), 1311(b)(1)(C), 1313(d), 1342(h).

[37 Cases that cite this headnote](#)

[11] Environmental Law

🔑 [Power to regulate](#)

States

🔑 [Environment;nuclear projects](#)

Interstate water pollution is controlled by federal law.

[3 Cases that cite this headnote](#)

[12] Environmental Law

🔑 [Interstate pollution](#)

Evidence supported finding by ALJ that discharge from Fayetteville, Arkansas, sewage treatment plant into interstate Illinois River basin would not violate Oklahoma water quality standards. Federal Water Pollution Control Act Amendments of 1972, §§ 208(b)(2), 301(b)(1)(C), 303(d), 402(h), as amended, 33 U.S.C.A. §§ 1288(b)(2), 1311(b)(1)(C), 1313(d), 1342(h).

[58 Cases that cite this headnote](#)

[13] Administrative Law and Procedure

🔑 [Administrative construction](#)

Environmental Law

🔑 [Scope of Inquiry on Review of Administrative Decision](#)

Environmental Protection Agency (EPA) is entitled to discretion to interpret its own regulations and those regulations are entitled to appropriate level of deference.

[4 Cases that cite this headnote](#)

[14] Administrative Law and Procedure

🔑 [Substantial evidence](#)

Court reviewing agency's adjudication should accept agency's factual findings if those findings are supported by substantial evidence in the record as a whole; court should not supplant agency's findings merely by identifying alternate findings that could be supported by substantial evidence.

[391 Cases that cite this headnote](#)

[15] Administrative Law and Procedure

🔑 [Arbitrary, unreasonable or capricious action; illegality](#)

Administrative agency ruling is "arbitrary and capricious" if agency has entirely failed to consider important aspect of problem.

[23 Cases that cite this headnote](#)

[16] Environmental Law

🔑 [Water pollution](#)

Court of Appeals made policy choice beyond its authority by ruling that, even if discharge of effluent from Arkansas sewage treatment plant would have no adverse impact on water quality, discharge into Illinois River which would flow through Oklahoma could be prohibited; it was not arbitrary for Environmental Protection Agency (EPA) to conclude, given benefits to river from

increased flow of relatively clean water, and benefits achieved in Arkansas by allowing new plant to operate as designed, that allowing discharge would be wiser.

7 Cases that cite this headnote

****1049** *Syllabus**

The Clean Water Act provides for two sets of water quality measures: effluent limitations, which are promulgated by the Environmental Protection Agency (EPA or Agency), and water quality standards, which are promulgated by the States. The Act generally prohibits the discharge of effluent into a navigable body of water unless the point source obtains a National Pollution Discharge Elimination System (NPDES) permit from a State with an EPA-approved permit program or from the EPA itself. A Fayetteville, Arkansas, sewage treatment plant received an EPA-issued permit, authorizing it to discharge effluent into a stream that ultimately reaches the Illinois River upstream from the Oklahoma border. Respondents, Oklahoma and other Oklahoma parties, challenged the permit before the EPA, alleging, *inter alia*, that the discharge violated Oklahoma water quality standards, which allow no degradation of water quality in the upper Illinois River. The EPA's Chief Judicial Officer remanded the initial affirmance of the permit by the Administrative Law Judge (ALJ), ruling that the Act requires an NPDES permit to impose any effluent limitations necessary to comply with applicable state water quality standards, and that those standards would be violated only if the record shows by a preponderance of the evidence that the discharge would cause an actual *detectable* violation of Oklahoma's water quality standards. The ALJ then made detailed findings of fact, concluding that Fayetteville had satisfied the Chief Judicial Officer's standard, and the Chief Judicial Officer sustained the permit's issuance. The Court of Appeals reversed, ruling that the Act does not allow a permit to be issued where a proposed source would discharge effluent that would contribute to conditions currently constituting a violation of applicable water quality standards. It concluded that the Illinois River was already degraded, that the Fayetteville effluent would reach the river in Oklahoma, and that the effluent would contribute to the river's deterioration even though it would not detectably affect the river's water quality.

***92** *Held:* The EPA's action was authorized by the Clean Water Act. Pp. 1052–1061.

(a) Where interstate discharge is involved, both federal common law of nuisance, *Milwaukee v. Illinois*, 451 U.S. 304, 101 S.Ct. 1784, 68 L.Ed.2d 114, and an affected State's common law, *International Paper Co. v. Ouellette*, 479 U.S. 481, 493, 107 S.Ct. 805, 812, 93 L.Ed.2d 883, are pre-empted. Affected States may not block a permit, but must apply to the EPA Administrator, who may disapprove a plan if he concludes that the discharge will have an undue impact on interstate waters. *Id.*, at 490–491, 107 S.Ct., at 809. Pp. 1052–1054.

****1050** (b) The EPA has construed the Act as requiring that EPA-issued permits comply with the requirements for a permit issued under an approved state plan and with § 401(a) of the Act, which appears to prohibit the issuance of a federal permit over the objection of an affected State unless compliance with the affected State's water quality requirements can be insured. Pp. 1054–1055.

(c) The EPA's requirement that the Fayetteville discharge comply with Oklahoma's water quality standards is a reasonable exercise of the substantial statutory discretion Congress has vested in the Agency. There is no need to address the question whether the Act requires compliance with affected States' standards, for it clearly does not limit the EPA's authority to mandate such compliance. EPA regulations, which since 1973 have required that an NPDES permit not be issued when compliance with affected States' water quality standards cannot be insured, are a reasonable exercise of the Agency's discretion and are a well-tailored means of reaching the Act's goal of achieving state water quality standards. The EPA's authority is not constrained by the limits in *Ouellette*, *supra*, concerning an affected State's direct input into the permit process, does not conflict with the Act's legislative history and statutory scheme, and is not incompatible with the balance among competing policies and interests that Congress struck in the Act. Pp. 1056–1057.

(d) Contrary to the Court of Appeals' interpretation, nothing in the Act mandates a complete ban on discharges into a waterway that is in violation of existing water quality standards. Instead, the Act vests in the EPA and the States broad authority to develop long-range,

area-wide programs to alleviate and eliminate existing pollution. Pp. 1057–1058.

(e) The Court of Appeals exceeded the legitimate scope of judicial review of an agency adjudication when it invalidated the EPA's issuance of the permit on the ground that the Agency misinterpreted Oklahoma's water quality standards. It substituted its own reading of the law for the EPA's. Thus, it failed to give substantial deference to the Agency's reasonable, consistently held interpretation of its own regulations, which incorporate the Oklahoma standards. It also disregarded well-established *93 standards for reviewing factual findings of agencies by making its own factual findings when the ALJ's findings were supported by substantial evidence. See generally *Universal Camera Corp. v. NLRB*, 340 U.S. 474, 71 S.Ct. 456, 95 L.Ed. 456. As a result, the court's conclusion that the river's degradation was an important and relevant factor which the EPA failed to consider was based on its own erroneous interpretation of the controlling law. Had it been properly respectful of the EPA's permissible reading of the Act—that what matters is not the river's current status, but whether the proposed discharge will have a detectable effect on that status—it would not have adjudged the Agency's decision arbitrary and capricious. Pp. 1058–1061.

908 F.2d 595 (CA10 1990), reversed.

STEVENS, J., delivered the opinion for a unanimous Court.

Attorneys and Law Firms

Lawrence G. Wallace, Washington, D.C., for petitioner, Environmental Protection Agency.

Edward W. Warren, Washington, D.C., for petitioners, Arkansas, et al.

Robert A. Butkin, Oklahoma City, Okl., for respondents.

Opinion

*94 Justice STEVENS delivered the opinion of the Court.

Pursuant to the Clean Water Act, 86 Stat. 816, as amended, 33 U.S.C. § 1251 *et seq.*, the Environmental Protection Agency (EPA or agency) issued a discharge

permit to a new point source in Arkansas, about 39 miles upstream from the Oklahoma state line. The question presented in this litigation is whether the EPA's finding that discharges from the new source would not cause a detectable **1051 violation of Oklahoma's *95 water quality standards satisfied the EPA's duty to protect the interests of the downstream State. Disagreeing with the Court of Appeals, we hold that the Agency's action was authorized by the statute.

I

In 1985, the city of Fayetteville, Arkansas, applied to the EPA, seeking a permit for the city's new sewage treatment plant under the National Pollution Discharge Elimination System (NPDES). After the appropriate procedures, the EPA, pursuant to § 402(a)(1) of the Act, 33 U.S.C. § 1342(a)(1), issued a permit authorizing the plant to discharge up to half of its effluent (to a limit of 6.1 million gallons per day) into an unnamed stream in northwestern Arkansas.¹ That flow passes through a series of three creeks for about 17 miles, and then enters the Illinois River at a point 22 miles upstream from the Arkansas–Oklahoma border.

The permit imposed specific limitations on the quantity, content, and character of the discharge and also included a number of special conditions, including a provision that if a study then underway indicated that more stringent limitations were necessary to ensure compliance with Oklahoma's water quality standards, the permit would be modified to incorporate those limits. App. 84.

Respondents challenged this permit before the EPA, alleging, *inter alia*, that the discharge violated the Oklahoma water quality standards. Those standards provide that “no degradation [of water quality] shall be allowed” in the upper Illinois River, including the portion of the river immediately downstream from the state line.²

*96 Following a hearing, the Administrative Law Judge (ALJ) concluded that the Oklahoma standards would not be implicated unless the contested discharge had “something more than a mere *de minimis* impact” on the State's waters. He found that the discharge would not have an “undue impact” on Oklahoma's waters and, accordingly, affirmed the issuance of the permit. App. to

Pet. for Cert. in No. 90–1262, pp. 101a–103a (emphasis deleted).

On a petition for review, the EPA's Chief Judicial Officer first ruled that § 301(b)(1)(C) of the Clean Water Act “requires an NPDES permit to impose any effluent limitations necessary to comply with applicable state water quality standards.”³ *Id.*, at 116a–117a. He **1052 then held that the Act *97 and EPA regulations offered greater protection for the downstream State than the ALJ's “undue impact” standard suggested. He explained the proper standard as follows:

“[A] mere theoretical impairment of Oklahoma's water quality standards—*i.e.*, an infinitesimal impairment predicted through modeling but not expected to be actually detectable or measurable—should not by itself block the issuance of the permit. In this case, the permit should be upheld if the record shows by a preponderance of the evidence that the authorized discharges would not cause an actual *detectable* violation of Oklahoma's water quality standards.” *Id.*, at 117a (emphasis in original).

On remand, the ALJ made detailed findings of fact and concluded that the city had satisfied the standard set forth by the Chief Judicial Officer. Specifically, the ALJ found that there would be no detectable violation of any of the components of Oklahoma's water quality standards. *Id.*, at 127a–143 a. The Chief Judicial Officer sustained the issuance of the permit. *Id.*, at 145a–153a.

Both the petitioners in No. 90–1262 (collectively Arkansas) and the respondents in this litigation sought judicial review.⁴ Arkansas argued that the Clean Water Act did not require an Arkansas point source to comply with Oklahoma's water quality standards. Oklahoma challenged the EPA's determination that the Fayetteville discharge would not produce a detectable violation of the Oklahoma standards.

The Court of Appeals did not accept either of these arguments. The court agreed with the EPA that the statute required compliance with Oklahoma's water quality standards, *98 see 908 F.2d 595, 602–615 (CA10 1990), and did not disagree with the Agency's determination that the discharges from the Fayetteville plant would not produce a detectable violation of those standards. *Id.*, at 631–633. Nevertheless, relying on a theory that neither

party had advanced, the Court of Appeals reversed the Agency's issuance of the Fayetteville permit. The court first ruled that the statute requires that “where a proposed source would discharge effluents that would contribute to conditions currently constituting a violation of applicable water quality standards, such [a] proposed source may not be permitted.” *Id.*, at 620. Then the court found that the Illinois River in Oklahoma was “already degraded,” that the Fayetteville effluent would reach the Illinois River in Oklahoma, and that that effluent could “be expected to contribute to the ongoing deterioration of the scenic [Illinois R]iver” in Oklahoma even though it would not detectably affect the river's water quality. *Id.*, at 621–629.

The importance and the novelty of the Court of Appeals' decision persuaded us to grant certiorari. 499 U.S. 946, 111 S.Ct. 1412, 113 L.Ed.2d 465 (1991). We now reverse.

II

Interstate waters have been a font of controversy since the founding of the Nation. *E.g.*, *Gibbons v. Ogden*, 9 Wheat. 1, 6 L.Ed. 23 (1824). This Court has frequently resolved disputes between States that are separated by a common river, see, *e.g.*, *Ohio v. Kentucky*, 444 U.S. 335, 100 S.Ct. 588, 62 L.Ed.2d 530 (1980), that border the same body of water, see, *e.g.*, **1053 *New York v. New Jersey*, 256 U.S. 296, 41 S.Ct. 492, 65 L.Ed. 937 (1921), or that are fed by the same river basin, see, *e.g.*, *New Jersey v. New York*, 283 U.S. 336, 51 S.Ct. 478, 75 L.Ed. 1104 (1931).

[1] Among these cases are controversies between a State that introduces pollutants to a waterway and a downstream State that objects. See, *e.g.*, *Missouri v. Illinois*, 200 U.S. 496, 26 S.Ct. 268, 50 L.Ed. 572 (1906). In such cases, this Court has applied principles of common law tempered by a respect for the sovereignty of the States. Compare *id.*, at 521, 26 S.Ct., at 270, with *Georgia v. Tennessee Copper Co.*, 206 U.S. 230, 237, 27 S.Ct. 618, 619, 51 L.Ed. 1038 (1907). In forging what “may *99 not improperly be called interstate common law,” *Illinois v. Milwaukee*, 406 U.S. 91, 105–106, 92 S.Ct. 1385, 1393–1394, 31 L.Ed.2d 712 (1972) (*Milwaukee I*), however, we remained aware “that new federal laws and new federal regulations may in time pre-empt the field of federal common law of nuisance.” *Id.*, at 107, 92 S.Ct. at 1395.

In *Milwaukee v. Illinois*, 451 U.S. 304, 101 S.Ct. 1784, 68 L.Ed.2d 114 (1981) (*Milwaukee II*), we held that the Federal Water Pollution Control Act Amendments of 1972 did just that. In addressing Illinois' claim that Milwaukee's discharges into Lake Michigan constituted a nuisance, we held that the comprehensive regulatory regime created by the 1972 amendments pre-empted Illinois' federal common law remedy. We observed that Congress had addressed many of the problems we had identified in *Milwaukee I* by providing a downstream State with an opportunity for a hearing before the source State's permitting agency, by requiring the latter to explain its failure to accept any recommendations offered by the downstream State, and by authorizing the EPA, in its discretion, to veto a source State's issuance of any permit if the waters of another State may be affected. *Milwaukee II*, 451 U.S., at 325–326, 101 S.Ct., at 1796–1797.

In *Milwaukee II*, the Court did not address whether the 1972 amendments had supplanted *state* common law remedies as well as the federal common law remedy. See *id.*, at 310, n. 4. On remand, Illinois argued that § 510 of the Clean Water Act, 33 U.S.C. § 1370, expressly preserved the State's right to adopt and enforce rules that are more stringent than federal standards.⁵ The Court of Appeals accepted Illinois' reading of § 510, but held that that section did “no more than *100 to save the right and jurisdiction of a state to regulate activity occurring within the confines of its boundary waters.” *Illinois v. Milwaukee*, 731 F.2d 403, 413 (CA7 1984), cert. denied, 469 U.S. 1196, 105 S.Ct. 979, 83 L.Ed.2d 981 (1985).

[2] This Court subsequently endorsed that analysis in *International Paper Co. v. Ouellette*, 479 U.S. 481, 107 S.Ct. 805, 93 L.Ed.2d 883 (1987), in which Vermont property owners claimed that the pollution discharged into Lake Champlain by a paper company located in New York constituted a nuisance under Vermont law. The Court held the Clean Water Act taken “as a whole, its purposes and its history” pre-empted an action based on the law of the affected State and that the only state law applicable to an interstate discharge is “the law of the State in which the point source is located.” *Id.*, at 493, 487, 107 S.Ct. at 812, 809. Moreover, in reviewing § 402(b) of the Act, the Court pointed out that when a new permit is being issued by the source State's permit-granting agency, the downstream State

****1054** “does not have the authority to block the issuance of the permit if it is dissatisfied with the proposed standards. An affected State's only recourse is to apply to the EPA Administrator, who then has the discretion to disapprove the permit if he concludes that the discharges will have an undue impact on interstate waters. § 1342(d)(2).... Thus the Act makes it clear that affected States occupy a subordinate position to source States in the federal regulatory program.” *Id.*, at 490–491, 107 S.Ct., at 811.⁶

***101** Unlike the foregoing cases, this litigation involves not a state-issued permit, but a federally issued permit. To explain the significance of this distinction, we comment further on the statutory scheme before addressing the specific issues raised by the parties.

III

The Clean Water Act anticipates a partnership between the States and the Federal Government, animated by a shared objective: “to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.” 33 U.S.C. § 1251(a). Toward this end, the Act provides for two sets of water quality measures. “Effluent limitations” are promulgated by the EPA and restrict the quantities, rates, and concentrations of specified substances which are discharged from point sources. See §§ 1311, 1314. “[W]ater quality standards” are, in general, promulgated by the States and establish the desired condition of a waterway. See § 1313. These standards supplement effluent limitations “so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.” *EPA v. California ex rel. State Water Resources Control Bd.*, 426 U.S. 200, 205, n. 12, 96 S.Ct. 2022, 2025, n. 12, 48 L.Ed.2d 578 (1976).

The EPA provides States with substantial guidance in the drafting of water quality standards. See generally 40 CFR pt. 131 (1991) (setting forth model water quality standards). Moreover, § 303 of the Act requires, *inter alia*, that state authorities periodically review water quality standards and secure the EPA's approval of any revisions in the standards. If the EPA recommends changes to the standards and the State fails to comply with that recommendation, the Act authorizes the EPA

to promulgate water quality standards for the State. 33 U.S.C. § 1313(c).

The primary means for enforcing these limitations and standards is the NPDES, enacted in 1972 as a critical part of Congress' "complete rewriting" of federal water pollution law. *Milwaukee II*, 451 U.S., at 317, 101 S.Ct., at 1793. Section 301(a) of the Act, 33 U.S.C. § 1311(a), generally prohibits the discharge of any effluent into a navigable body of water unless the point source has obtained an NPDES permit. Section 402 establishes the NPDES permitting regime, and describes two types of permitting systems: state permit programs that must satisfy federal requirements and be approved by the EPA, and a federal program administered by the EPA.

Section 402(b) authorizes each State to establish "its own permit program for discharges into navigable waters within its jurisdiction." 33 U.S.C. § 1342(b). Among the requirements the state program must satisfy **1055 are the procedural protections for downstream States discussed in *Ouellette* and *Milwaukee II*. See §§ 1342(b) (3), (5).⁷ Although these provisions do not authorize the downstream State to veto the issuance of a permit for a new point source in another State, the Administrator retains authority to block the issuance of any state-issued permit that is outside the guidelines and requirements of the Act. § 1342(d)(2).⁸

[3] *103 In the absence of an approved state program, the EPA may issue an NPDES permit under § 402(a) of the Act. (In these cases, for example, because Arkansas had not been authorized to issue NPDES permits when the Fayetteville plant was completed, the permit was issued by the EPA itself.) The EPA's permit program is subject to the "same terms, conditions, and requirements" as a state permit program. 33 U.S.C. § 1342(a)(3). Notwithstanding this general symmetry, the EPA has construed the Act as requiring that EPA-issued NPDES permits also comply with § 401(a). That section, which predates § 402 and the NPDES, applies to a broad category of federal licenses, and sets forth requirements for "[a]ny applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." 33 U.S.C. § 1341(a). Section 401(a) (2) appears to prohibit the issuance of any federal license or permit over the objection of an affected State

unless compliance with the affected State's water quality requirements can be ensured.⁹

**1056 *104 IV

[4] The parties have argued three analytically distinct questions concerning the interpretation of the Clean Water Act. First, does the Act require the EPA, in crafting and issuing a permit to a point source in one State, to apply the water quality standards of downstream States? Second, even if the Act does not *require* as much, does the Agency have the statutory authority to mandate such compliance? Third, does the Act provide, as the Court of Appeals held, that once a body of water fails to meet water quality standards no discharge that yields effluent that reach the degraded waters will be permitted?

In these cases, it is neither necessary nor prudent for us to resolve the first of these questions. In issuing the Fayetteville permit, the EPA assumed it was obligated by both the Act and its own regulations to ensure that the Fayetteville discharge would not violate Oklahoma's standards. See App. to Pet. for Cert. in No. 90–1262, pp. 116a–117a, and n. 14. As we discuss below, this assumption was permissible and reasonable and therefore there is no need for us to address whether the Act requires as much. Moreover, much of the analysis and argument in the briefs of the parties relies on statutory provisions that govern not only federal permits issued pursuant to §§ 401(a) and 402(a), but also state permits issued under § 402(b). It seems unwise to evaluate those arguments in a case such as these, which only involve a federal permit.

[5] *105 Our decision not to determine at this time the scope of the Agency's statutory *obligations* does not affect our resolution of the second question, which concerns the Agency's statutory *authority*. Even if the Clean Water Act itself does not require the Fayetteville discharge to comply with Oklahoma's water quality standards, the statute clearly does not limit the EPA's authority to mandate such compliance.

[6] Since 1973, EPA regulations have provided that an NPDES permit shall not be issued "[w]hen the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States."¹⁰ 40 CFR § 122.4(d) (1991); see also 38 Fed.Reg. 13533 (1973); 40 CFR § 122.44(d) (1991). Those

regulations—relied upon by the EPA in the issuance of the Fayetteville permit—constitute a reasonable exercise of the Agency's statutory authority.

Congress has vested in the Administrator broad discretion to establish conditions for NPDES permits. Section 402(a)(2) provides that for EPA-issued permits “[t]he Administrator shall prescribe conditions ... to assure compliance with the requirements of [§ 402(a)(1)] and such other requirements as he deems appropriate.” 33 U.S.C. § 1342(a)(2) (emphasis added). Similarly, Congress preserved for the Administrator broad authority to oversee state permit programs:

“No permit shall issue ... if the Administrator ... objects in writing to the issuance of such permit as being outside the guidelines and requirements of this chapter.” § 1342(d)(2).

The regulations relied on by the EPA were a perfectly reasonable exercise of the Agency's statutory discretion. The application of state water quality standards in the interstate context is wholly consistent with the Act's broad purpose “to restore and maintain the chemical, physical, and *106 biological integrity of the Nation's waters.” 33 U.S.C. § 1251(a). Moreover, as noted above, § 301(b)(1)(C) expressly identifies the achievement of state water quality standards as one of the Act's central objectives. The Agency's regulations conditioning NPDES permits are a well-tailored means of achieving this goal.

[7] Notwithstanding this apparent reasonableness, Arkansas argues that our description **1057 in *Ouellette* of the role of affected States in the permit process and our characterization of the affected States' position as “subordinate,” see 479 U.S., at 490–491, 107 S.Ct. at 810–811, indicates that the EPA's application of the Oklahoma standards was error. We disagree. Our statement in *Ouellette* concerned only an affected State's input into the permit process; that input is clearly limited by the plain language of § 402(b). Limits on an affected State's direct participation in permitting decisions, however, do not in any way constrain the EPA's authority to require a point source to comply with downstream water quality standards.

Arkansas also argues that regulations requiring compliance with downstream standards are at odds with the legislative history of the Act and with the statutory scheme established by the Act. Although we agree with

Arkansas that the Act's legislative history indicates that Congress intended to grant the Administrator discretion in his oversight of the issuance of NPDES permits,¹¹ we find nothing in that history to indicate that Congress intended to preclude the EPA from establishing a general requirement that such permits be conditioned to ensure compliance with downstream water quality standards.

Similarly, we agree with Arkansas that in the Clean Water Act Congress struck a careful balance among competing policies and interests, but do not find the EPA regulations concerning *107 the application of downstream water quality standards at all incompatible with that balance. Congress, in crafting the Act, protected certain sovereign interests of the States; for example, § 510 allows States to adopt more demanding pollution-control standards than those established under the Act. Arkansas emphasizes that § 510 preserves such state authority only as it is applied to the waters of the regulating State. Even assuming Arkansas' construction of § 510 is correct, cf. *id.*, at 493, 107 S.Ct., at 812, that section only concerns state authority and does not constrain the EPA's authority to promulgate reasonable regulations requiring point sources in one State to comply with water quality standards in downstream States.

[8] For these reasons, we find the EPA's requirement that the Fayetteville discharge comply with Oklahoma's water quality standards to be a reasonable exercise of the Agency's substantial statutory discretion. Cf. *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 842–845, 104 S.Ct. 2778, 2781–2783, 81 L.Ed.2d 694 (1984).

V

[9] The Court of Appeals construed the Clean Water Act to prohibit any discharge of effluent that would reach waters already in violation of existing water quality standards.¹² We find nothing in the Act to support this reading.

**1058 *108 The interpretation of the statute adopted by the court had not been advanced by any party during the Agency or court proceedings. Moreover, the Court of Appeals candidly acknowledged that its theory “has apparently never before been addressed by a federal court.” 908 F.2d, at 620, n. 39. The only statutory

provision the court cited to support its legal analysis was § 402(h), see *id.*, at 633, which merely authorizes the EPA (or a state permit program) to prohibit a publicly owned treatment plant that is violating a condition of its NPDES permit from accepting any additional pollutants for treatment until the ongoing violation has been corrected. See 33 U.S.C. § 1342(h).

Although the Act contains several provisions directing compliance with state water quality standards, see, e.g., § 1311(b)(1)(C), the parties have pointed to nothing that mandates a complete ban on discharges into a waterway that is in violation of those standards. The statute does, however, contain provisions designed to remedy existing water quality violations and to allocate the burden of reducing undesirable discharges between existing sources and new sources. See, e.g., § 1313(d). Thus, rather than establishing the categorical ban announced by the Court of Appeals—which might frustrate the construction of new plants that would improve existing conditions—the Clean Water Act vests in the EPA and the States broad authority to develop long-range, area-wide programs to alleviate and eliminate existing pollution. See, e.g., § 1288(b)(2).

To the extent that the Court of Appeals relied on its interpretation of the Act to reverse the EPA's permitting decision, that reliance was misplaced.

*109 VI

[10] The Court of Appeals also concluded that the EPA's issuance of the Fayetteville permit was arbitrary and capricious because the Agency misinterpreted Oklahoma's water quality standards. The primary difference¹³ between the court's and the Agency's interpretation of the standards derives from the court's construction of the Act. Contrary to the EPA's interpretation of the Oklahoma standards, the Court of Appeals read those standards as containing the same categorical ban on new discharges that the court had found in the Clean Water Act itself. Although we do not believe the text of the Oklahoma standards supports the court's reading (indeed, we note that Oklahoma itself had not advanced that interpretation in its briefs in the Court of Appeals), we reject it for a more fundamental reason—namely, that the Court of Appeals exceeded the legitimate scope of judicial review of an agency adjudication. To emphasize the importance

of this point, we shall first briefly assess the soundness of the EPA's interpretation and application of the Oklahoma *110 standards and then comment more specifically on the Court of Appeals' approach.

As discussed above, an EPA regulation requires an NPDES permit to comply “with the applicable water quality requirements of **1059 all affected States.” 40 CFR § 122.4(d) (1991). This regulation effectively incorporates into federal law those state-law standards the Agency reasonably determines to be “applicable.” In such a situation, then, state water quality standards—promulgated by the States with substantial guidance from the EPA¹⁴ and approved by the Agency—are part of the federal law of water pollution control.

[11] Two features of the body of law governing water pollution support this conclusion. First, as discussed more thoroughly above, we have long recognized that interstate water pollution is controlled by *federal* law. See *supra*, at 1052–1054. Recognizing that the system of federally approved state standards as applied in the interstate context constitutes federal law is wholly consistent with this principle. Second, treating state standards in interstate controversies as federal law accords with the Act's purpose of authorizing the EPA to create and manage a uniform system of interstate water pollution regulation.

Because we recognize that, at least insofar as they affect the issuance of a permit in another State, the Oklahoma standards have a federal character, the EPA's reasonable, consistently held interpretation of those standards is entitled to substantial deference. Cf. *INS v. National Center for Immigrants' Rights*, 502 U.S. 183, 189–190, 112 S.Ct. 551, 556, 116 L.Ed.2d 546 (1991); *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984). In these cases, the Chief Judicial Officer ruled that the Oklahoma standards—which require that there be “no degradation” of the upper Illinois River—would *111 only be violated if the discharge effected an “actually detectable or measurable” change in water quality. App. to Pet. for Cert. in No. 90–1262, p. 117a.

This interpretation of the Oklahoma standards is certainly reasonable and consistent with the purposes and principles of the Clean Water Act. As the Chief Judicial Officer noted, “unless there is some method for measuring compliance, there is no way to ensure compliance.” *Id.*,

at 118a, n. 16 (internal quotation marks omitted; citation omitted). Moreover, this interpretation of the Oklahoma standards makes eminent sense in the interstate context: If every discharge that had some theoretical impact on a downstream State were interpreted as “degrading” the downstream waters, downstream States might wield an effective veto over upstream discharges.

[12] The EPA's application of those standards in these cases was also sound. On remand, the ALJ scrutinized the record and made explicit factual findings regarding four primary measures of water quality under the Oklahoma standards: eutrophication,¹⁵ esthetics,¹⁶ dissolved oxygen,¹⁷ and ****1060** metals. ***112** ¹⁸ In each case, the ALJ found that the Fayetteville discharge would not lead to a detectable change in water quality. He therefore concluded that the Fayetteville discharge would not violate the Oklahoma water quality standards. Because we agree with the Agency's Chief Judicial Officer that these findings are supported by substantial evidence, we conclude that the Court of Appeals should have affirmed both the EPA's construction of the regulations and the issuance of the Fayetteville permit.

In its review of the EPA's interpretation and application of the Oklahoma standards, the Court of Appeals committed three mutually compounding errors.

[13] First, the court failed to give due regard to the EPA's interpretation of its own regulations, as those regulations incorporate the Oklahoma standards. Instead the court voiced its own interpretation of the governing law and concluded that “where a proposed source would discharge effluents that would contribute to conditions currently constituting a violation of applicable water quality standards, such [a] proposed source may not be permitted.” 908 F.2d, at 620. As we have already pointed out, that reading of the law is not supported by the statute or by any EPA regulation. The Court of Appeals sat in review of an agency action and should have afforded the EPA's interpretation of the governing law an appropriate level of deference. See generally *Chevron, supra*, 467 U.S., at 842–844, 104 S.Ct., at 2781–2782.

[14] Second, the court disregarded well-established standards for reviewing the factual findings of agencies and instead made its own factual findings. The troubling nature of the court's analysis appears on the face of the opinion itself: At least four times, the court

concluded that “there was substantial evidence before the ALJ to support” particular findings which the court thought appropriate, but which were ***113** contrary to those actually made by the ALJ. 908 F.2d, at 620, 625, 627, 629. Although we have long recognized the “substantial evidence” standard in administrative law, the court below turned that analysis on its head. A court reviewing an agency's adjudicative action should accept the *agency's* factual findings if those findings are supported by substantial evidence on the record as a whole. See generally *Universal Camera Corp. v. NLRB*, 340 U.S. 474, 71 S.Ct. 456, 95 L.Ed. 456 (1951). The court should not supplant the agency's findings merely by identifying alternative findings that could be supported by substantial evidence.

Third, the court incorrectly concluded that the EPA's decision was arbitrary and capricious. This error is derivative of the court's first two errors. Having substituted its reading of the governing law for the Agency's, and having made its own factual findings, the Court of Appeals concluded that the EPA erred in not considering an important and relevant fact—namely, that the upper Illinois River was (by the court's assessment) already degraded.

As we have often recognized, an agency ruling is “arbitrary and capricious if the agency has ... entirely failed to consider an important aspect of the problem.” *Motor Vehicle Mfrs. Assn. of United States, Inc. v. State Farm Mut. Automobile Ins. Co.*, 463 U.S. 29, 43, 103 S.Ct. 2856, 2867, 77 L.Ed.2d 443 (1983). However, in these cases, the degraded status of the river is only an “important aspect” because of the Court of Appeals' novel and erroneous interpretation of the controlling law. Under the EPA's interpretation of that law, what matters is not the river's current status, but rather whether the proposed discharge will have a “detectable effect” on that status. If the Court of Appeals had been properly respectful of the Agency's permissible reading of the Act and ****1061** the Oklahoma standards, the court would not have adjudged the Agency's decision arbitrary and capricious for this reason.

[15] [16] In sum, the Court of Appeals made a policy choice that it was not authorized to make. Arguably, as that court suggested, ***114** it might be wise to prohibit any discharge into the Illinois River, even if that discharge would have no adverse impact on water quality. But

it was surely not arbitrary for the EPA to conclude—given the benefits to the river from the increased flow of relatively clean water¹⁹ and the benefits achieved in Arkansas by allowing the new plant to operate as designed—that allowing the discharge would be even wiser. It is not our role, or that of the Court of Appeals, to decide which policy choice is the better one, for it is clear that Congress has entrusted such decisions to the Environmental Protection Agency.

Accordingly, the judgment of the Court of Appeals is

Reversed.

All Citations

503 U.S. 91, 112 S.Ct. 1046, 117 L.Ed.2d 239, 34 ERC 1193, 60 USLW 4176, 22 Env'tl. L. Rep. 20,552

Footnotes

- * The syllabus constitutes no part of the opinion of the Court but has been prepared by the Reporter of Decisions for the convenience of the reader. See *United States v. Detroit Lumber Co.*, 200 U.S. 321, 337, 26 S.Ct. 282, 287, 50 L.Ed. 499.
- 1 The permit also authorized the plant to discharge the remainder of its effluent into the White River, a river that does not flow into Oklahoma; this aspect of the permit is not at issue in this litigation.
- 2 Section 5 of the Oklahoma water quality standards provides:
 “All streams and bodies of water designated as (a) are protected by prohibition of any new point source discharge of wastes or increased load from an existing point source except under conditions described in Section 3.
 “All streams designated by the State as ‘scenic river areas,’ and such tributaries of those streams as may be appropriate will be so designated. Best management practices for control of nonpoint source discharge should be initiated when feasible.” App. 46–47.
 Oklahoma has designated the portion of the Illinois River immediately downstream from the state line as a “scenic river.” *Okla.Stat., Tit. 82, § 1452(b)(1)* (Supp.1989); see also App. 54.
 Section 3 of the Oklahoma water quality standards provides, in relevant part:
 “The intent of the Anti-degradation Policy is to protect all waters of the State from quality degradation. Existing instream water uses shall be maintained and protected. No further water quality degradation which would interfere with or become injurious to existing instream water uses shall be allowed. Oklahoma's waters constitute a valuable State resource and shall be protected, maintained and improved for the benefit of all the citizens.

 “No degradation shall be allowed in high quality waters which constitute an outstanding resource or in waters of exceptional recreational or ecological significance. These include water bodies located in national and State parks, Wildlife Refuges, and those designated ‘Scenic Rivers’ in Appendix A.” App. 27–28.
- 3 Section 301(b)(1)(C) provides, in relevant part, that
 “there shall be achieved—

 “(C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet *water quality standards ... established pursuant to any State law or regulations ...* or required to implement any applicable water quality standard established pursuant to this chapter.” *33 U.S.C. § 1311(b)(1)(C)* (emphasis added).
- 4 The Arkansas petition was filed in the Court of Appeals for the Eighth Circuit and transferred to the Tenth Circuit where it was consolidated with the petition filed by the respondents.
- 5 Section 510 provides in relevant part:
 “Except as expressly provided in this [Act], nothing in this [Act] shall (1) preclude or deny the right of any State or political subdivision thereof or interstate agency to adopt or enforce (A) any standard or limitation respecting discharges of pollutants, or (B) any requirement respecting control or abatement of pollution [with exceptions]; or (2) be construed as impairing or in any manner affecting any right or jurisdiction of the States *with respect to the waters (including boundary waters) of such States.*” *33 U.S.C. § 1370* (emphasis added).
- 6 This description of the downstream State's role in the issuance of a new permit by a source State was apparently consistent with the EPA's interpretation of the Act at the time. The Government's *amicus curiae* brief in *Ouellette* stated that “the affected neighboring state [has] only an advisory role in the formulation of applicable effluent standards or

limitations. The affected state may try to persuade the federal government or the source state to increase effluent requirements, but *ultimately possesses no statutory authority to compel that result, even when its waters are adversely affected by out-of-state pollution*. See [33 U.S.C. § 1341\(a\)\(2\), 1342\(b\)\(3\) and \(5\)](#)....” Brief for United States as *Amicus Curiae*, O.T. 1986, No. 85–1233, p. 19 (emphasis added; footnote omitted).

7 Section 402(b) requires state permit programs

“(3) [t]o insure that ... any other State the waters of which may be affected ... receive notice of each application for a permit and to provide an opportunity for public hearing before a ruling on each such application;

.....

“(5) [t]o insure that any State (other than the permitting State), whose waters may be affected by the issuance of a permit may submit written recommendations to the permitting State (and the Administrator) with respect to any permit application and, if any part of such written recommendations are not accepted by the permitting State, that the permitting State will notify such affected State (and the Administrator) in writing of its failure to so accept such recommendations together with its reasons for so doing.” [33 U.S.C. § 1342\(b\)](#).

Although § 402(b) focuses on state-issued permits, § 402(a)(3) requires that, in issuing an NPDES permit, the Administrator follow the same procedures required of state permit programs. See [§ 1342\(a\)\(3\)](#); see also [33 U.S.C. § 1341\(a\)\(2\)](#).

8 Section 402(d)(2) provides:

“(2) No permit shall issue (A) if the Administrator within ninety days of the date of his notification under subsection (b)(5) of this section objects in writing to the issuance of such permit, or (B) if the Administrator within ninety days of the date of transmittal of the proposed permit by the State objects in writing to the issuance of such permit as being outside the guidelines and requirements of this chapter. Whenever the Administrator objects to the issuance of a permit under this paragraph such written objection shall contain a statement of the reasons for such objection and the effluent limitations and conditions which such permit would include if it were issued by the Administrator.” [33 U.S.C. § 1342\(d\)\(2\)](#).

9 Section 401(a)(2) provides, in relevant part:

“Whenever such a discharge may affect, as determined by the Administrator, the quality of the waters of any other State, the Administrator ... shall so notify such other State, the licensing or permitting agency, and the applicant. If, within sixty days after receipt of such notification, such other State determines that such discharge will affect the quality of its waters so as to violate any water quality requirements in such State, and within such sixty-day period notifies the Administrator and the licensing or permitting agency in writing of its objection to the issuance of such license or permit and requests a public hearing on such objection, the licensing or permitting agency shall hold such a hearing. The Administrator shall at such hearing submit his evaluation and recommendations with respect to any such objection to the licensing or permitting agency. Such agency, based upon the recommendations of such State, the Administrator, and upon any additional evidence, if any, presented to the agency at the hearing, shall condition such license or permit in such manner as may be necessary to insure compliance with applicable water quality requirements. If the imposition of conditions cannot insure such compliance such agency shall not issue such license or permit.” [33 U.S.C. § 1341\(a\)\(2\)](#).

10 This restriction applies whether the permit is issued by the EPA or by an approved state program. See [40 CFR § 123.25 \(1991\)](#).

11 See, e.g., 1 Legislative History of Water Pollution Control Act Amendments of 1972 (Committee Print compiled for the Senate Committee on Public Works by the Library of Congress), Ser. No. 93–1, pp. 322, 388–389, 814 (1973); see also [33 U.S.C. § 1342\(d\)\(3\)](#).

12 “[W]e hold that the Clean Water Act prohibits granting an NPDES permit under the circumstances of this case (i.e., where applicable water quality standards have already been violated) and reverse EPA’s decision to permit Fayetteville to discharge any part of its effluent to the Illinois River Basin.” [908 F.2d 595, 616 \(CA10 1990\)](#).

“Congress cannot reasonably be presumed to have intended to exclude from the CWA’s ‘all-encompassing program,’ [451 U.S., at 318 \[101 S.Ct., at 1793\]](#) a permitting decision arising in circumstances such as those of this case. It is even more unfathomable that Congress fashioned a ‘comprehensive ... policy for the *elimination* of water pollution,’ *id.*, which sanctions continued pollution once minimum water quality standards have been transgressed. More likely, Congress simply never contemplated that EPA or a state would consider it permissible to authorize further pollution under such circumstances. We will not ascribe to the Act either the gaping loophole or the irrational purpose necessary to uphold EPA’s action in this case.” *Id.*, at [632](#) (footnotes omitted).

13 The court identified three errors in the EPA’s reading of the Oklahoma standards. First, the court correctly observed that the ALJ and the Chief Judicial Officer misinterpreted § 4.10(c) of the standards as governing only the discharge of phosphorus into lakes, rather than the discharge of phosphorus into lakes and into all “perennial and intermittent streams.”

Id., at 617 (emphasis omitted). This error was harmless because the ALJ found that the discharge into Lake Francis would comply with § 4.10(c) and it is undisputed that that discharge produced a greater threat to the slow-moving water of the lake than to the rapid flow in the river.

The second flaw identified by the court was the ALJ's mistaken reliance on the 1985, rather than the 1982 version, of the Oklahoma standards. We agree with the Chief Judicial Officer, who also noted this error, that the portions of the two versions relevant to this case "do not differ materially." App. to Pet. for Cert. in No. 90–1262, p. 150a. Therefore, this error was also harmless.

Because these two errors were harmless, we have focused in the text on the major difference between the court's and the EPA's readings of the Oklahoma standards: the "no degradation" provision.

- 14 See *supra*, at 1054. Oklahoma's water quality standards closely track the EPA's model standards in effect at that time. Compare § 3 of the Oklahoma standards with 40 CFR § 35.1550(e)(1) (1981).
- 15 Eutrophication is the "normally slow aging process by which a lake evolves into a bog or marsh.... During eutrophication the lake becomes so rich in nutritive compounds (especially nitrogen and phosphorus) that algae and other microscopic plant life become superabundant, thereby 'choking' the lake...." App. 57–58. With regard to eutrophication, the ALJ found that the Fayetteville plant would discharge 30 pounds of phosphorus per day, only about 6 pounds of which would reach the Arkansas/Oklahoma border, and that such a small amount would not result in an increase in eutrophication. App. to Pet. for Cert. in No. 90–1262, p. 129a.
- 16 With regard to esthetics, the ALJ concluded that the only discharged compound that would affect esthetics was phosphorus and that, again, the amount of that substance crossing the border would not affect the esthetic quality of Oklahoma's waters. *Id.*, at 135a–136a.
- 17 With regard to dissolved oxygen, the ALJ found that in the 39 miles between discharge and the border the effluent would experience "complete oxygen recovery" and therefore would not affect the dissolved oxygen levels in the river. *Id.*, at 140a.
- 18 With regard to metals, the ALJ concluded that the concentrations of metals would be so low as not to violate the Oklahoma standards. *Id.*, at 143a.
- 19 Justice Holmes recognized this potential benefit years ago:
"There is no pretence that there is a nuisance of the simple kind that was known to the older common law. There is nothing which can be detected by the unassisted senses—no visible increase of filth, no new smell. On the contrary, it is proved that the great volume of pure water from Lake Michigan which is mixed with the sewage at the start has improved the Illinois River in these respects to a noticeable extent. Formerly it was sluggish and ill smelling. Now it is a comparatively clear stream to which edible fish have returned. Its water is drunk by the fisherman, it is said, without evil results." *Missouri v. Illinois*, 200 U.S. 496, 522, 26 S.Ct. 268, 270, 50 L.Ed. 572 (1906).

West's Annotated California Codes
Constitution of the State of California 1879 (Refs & Annos)
Article Xiii.b. Government Spending Limitation (Refs & Annos)

West's Ann.Cal.Const. Art. 13B, § 6

§ 6. New programs or services mandated by Legislature or state agencies; subvention; appropriation of funds or suspension of operation

Effective: June 4, 2014

[Currentness](#)

SEC. 6. (a) Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the State shall provide a subvention of funds to reimburse that local government for the costs of the program or increased level of service, except that the Legislature may, but need not, provide a subvention of funds for the following mandates:

- (1) Legislative mandates requested by the local agency affected.
- (2) Legislation defining a new crime or changing an existing definition of a crime.
- (3) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975.
- (4) Legislative mandates contained in statutes within the scope of paragraph (7) of [subdivision \(b\) of Section 3 of Article I](#).

(b)(1) Except as provided in paragraph (2), for the 2005-06 fiscal year and every subsequent fiscal year, for a mandate for which the costs of a local government claimant have been determined in a preceding fiscal year to be payable by the State pursuant to law, the Legislature shall either appropriate, in the annual Budget Act, the full payable amount that has not been previously paid, or suspend the operation of the mandate for the fiscal year for which the annual Budget Act is applicable in a manner prescribed by law.

(2) Payable claims for costs incurred prior to the 2004-05 fiscal year that have not been paid prior to the 2005-06 fiscal year may be paid over a term of years, as prescribed by law.

(3) Ad valorem property tax revenues shall not be used to reimburse a local government for the costs of a new program or higher level of service.

(4) This subdivision applies to a mandate only as it affects a city, county, city and county, or special district.

(5) This subdivision shall not apply to a requirement to provide or recognize any procedural or substantive protection, right, benefit, or employment status of any local government employee or retiree, or of any local government employee organization, that arises from, affects, or directly relates to future, current, or past local government employment and that constitutes a mandate subject to this section.

(c) A mandated new program or higher level of service includes a transfer by the Legislature from the State to cities, counties, cities and counties, or special districts of complete or partial financial responsibility for a required program for which the State previously had complete or partial financial responsibility.

Credits

(Adopted Nov. 6, 1979. Amended by Stats.2004, Res. c. 133 (S.C.A.4) ([Prop.1A, approved Nov. 2, 2004](#), eff. Nov. 3, 2004); Stats.2013, Res. c. 123 (S.C.A.3), § 2 ([Prop. 42, approved June 3, 2014](#), eff. June 4, 2014).)

[Notes of Decisions \(202\)](#)

West's Ann. Cal. Const. Art. 13B, § 6, CA CONST Art. 13B, § 6
Current with urgency legislation through Ch. 14 of 2017 Reg.Sess



KeyCite Yellow Flag - Negative Treatment

Distinguished by [City of Arcadia v. State Water Resources Control Bd.](#), Cal.App. 4 Dist., December 14, 2010

35 Cal.4th 613

Supreme Court of California

CITY OF BURBANK, Plaintiff and Appellant,

v.

STATE WATER RESOURCES CONTROL BOARD et al., Defendants and Appellants.
City of Los Angeles, Plaintiff and Respondent,

v.

State Water Resources Control Board et al., Defendants and Appellants.

Nos. S119248, B151175, B152562.

|
April 4, 2005.

|

Rehearing Denied June 29, 2005.*

Synopsis

Background: Cities filed petitions for writs of mandate challenging pollutant limitations in wastewater discharge permits issued by regional water quality control boards. The Superior Court, Los Angeles County, Nos. BS060957 and BS060960, [Dzintra I. Janavs, J.](#), set aside permits. Regional board and state water resources control board appealed. The Court of Appeal consolidated the cases and reversed. The Supreme Court granted review, superseding the opinion of the Court of Appeal.

Holdings: The Supreme Court, [Kennard, J.](#), held that:

[1] regional board may not consider economic factors as justification for imposing pollutant restrictions in wastewater discharge permit which are less stringent than applicable federal standards, and

[2] when imposing more stringent pollutant restrictions that those required by federal law, regional board may take economic factors into account.

Judgment of Court of Appeal affirmed, and matter remanded.

[Brown, J.](#), filed concurring opinion.

Opinion, [4 Cal.Rptr.3d 27](#), superseded.

West Headnotes (5)

[1] Environmental Law

🔑 Purpose

Clean Water Act is a comprehensive water quality statute designed to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Federal Water Pollution Control Act Amendments of 1972, § 101 et seq., as amended, [33 U.S.C.A. § 1251 et seq.](#)

[11 Cases that cite this headnote](#)

[2] Environmental Law

🔑 Conditions and limitations

States

🔑 Environment;nuclear projects

Regional water quality control board may not consider economic factors as justification for imposing pollutant restrictions in wastewater discharge permit which are less stringent than applicable federal standards, despite statute directing board to take such factors into consideration, because the federal constitutional supremacy clause requires state law to yield to federal law. [U.S.C.A. Const. Art. 6, cl. 2](#); Federal Water Pollution Control Act Amendments of 1972, §§ 101 et seq., 301(a), (b)(1)(B, C), 402(a)(1, 3), as amended, [33 U.S.C.A. §§ 1251 et seq.](#), [1311\(a\)](#), [\(b\)\(1\)\(B, C\)](#), [1342\(a\)\(1, 3\)](#); [West's Ann.Cal.Water Code §§ 13000 et seq.](#), [13241\(d\)](#), [13263](#), [13377](#).

See 4 Witkin, Summary of Cal. Law (9th ed. 1987) Real Property, §§ 68, 69; 8 Miller & Starr, Cal. Real Estate (3d ed. 2001) § 23:54; Cal. Jur. 3d, Pollution and Conservation Laws, § 126.

[14 Cases that cite this headnote](#)

[3] Statutes**🔑 Purpose and intent**

When construing any statute, the court's task is to determine the Legislature's intent when it enacted the statute so as to adopt the construction that best effectuates the purpose of the law.

[13 Cases that cite this headnote](#)

[4] States**🔑 Conflicting or conforming laws or regulations**

Under the federal Constitution's supremacy clause, a state law that conflicts with federal law is without effect. [U.S.C.A. Const. Art. 6, cl. 2.](#)

[Cases that cite this headnote](#)

[5] Environmental Law**🔑 Conditions and limitations**

When imposing more stringent pollutant restrictions in a wastewater discharge permit than those required by federal law, a regional water quality control board may take into account the economic effects of doing so. Federal Water Pollution Control Act Amendments of 1972, §§ 101 et seq., 101(b), 510, as amended, [33 U.S.C.A. §§ 1251 et seq., 1251\(b\), 1370; West's Ann.Cal.Water Code §§ 13000 et seq., 13241\(d\), 13263, 13377.](#)

[17 Cases that cite this headnote](#)

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Fulbright & Jaworski, [Colin Lennard](#), [Patricia Chen](#), Los Angeles; Archer Norris and [Peter W. McGaw](#), Walnut Creek, for California Association of Sanitation Agencies as Amicus Curiae on behalf of Plaintiffs and Appellants.

Opinion

[KENNARD](#), J.

618** *864** Federal law establishes national water quality standards but allows the states to enforce their own water quality laws so long as they comply with federal standards. Operating within this federal-state framework, California's nine Regional Water Quality Control Boards establish water quality policy. They also issue permits for the discharge of treated wastewater; these permits specify the maximum allowable concentration of chemical pollutants in the discharged wastewater.

The question here is this: When a regional board issues a permit to a wastewater treatment facility, must the board take into account the facility's costs of complying with the board's restrictions on pollutants in the wastewater to be discharged? The trial court ruled that California law required a regional board to weigh the economic burden on the facility against the expected environmental benefits of reducing pollutants in the wastewater discharge. The Court of Appeal disagreed. On petitions by the municipal operators of three wastewater treatment facilities, we granted review.

We reach the following conclusions: Because both California law and federal law require regional boards to comply with federal clean water standards, and because the supremacy clause of the United States Constitution requires state law to yield to federal law, a regional board, when issuing a wastewater discharge permit, may not consider economic factors to justify imposing pollutant restrictions that are *less stringent* than the applicable federal standards require. When, however, a regional board is considering whether to make the pollutant restrictions in a wastewater discharge permit

more stringent than federal law requires, California law allows the board to take into account economic ****865** factors, including the wastewater discharger's cost of compliance. We remand this case for further proceedings to determine whether the pollutant limitations in the permits challenged here meet or exceed federal standards.

***619 I. STATUTORY BACKGROUND**

The quality of our nation's waters is governed by a “complex statutory and regulatory scheme ... that implicates both federal and state administrative responsibilities.” (*PUD No. 1 of Jefferson County v. Washington Department of Ecology* (1994) 511 U.S. 700, 704, 114 S.Ct. 1900, 128 L.Ed.2d 716.) We first discuss California law, then federal law.

A. California Law

In California, the controlling law is the Porter–Cologne Water Quality Control Act (Porter–Cologne Act), which was enacted in 1969. (*Wat.Code*, § 13000 *et seq.*, added by Stats.1969, ch. 482, § 18, p. 1051.)¹ Its goal is “to attain the highest water *****307** quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.” (§ 13000.) The task of accomplishing this belongs to the State Water Resources Control Board (State Board) and the nine Regional Water Quality Control Boards; together the State Board and the regional boards comprise “the principal state agencies with primary responsibility for the coordination and control of water quality.” (§ 13001.) As relevant here, one of those regional boards oversees the Los Angeles region (the Los Angeles Regional Board).²

Whereas the State Board establishes statewide policy for water quality control (§ 13140), the regional boards “formulate and adopt water quality control plans for all areas within [a] region” (§ 13240). The regional boards' water quality plans, called “basin plans,” must address the beneficial uses to be protected as well as water quality objectives, and they must establish a program of implementation. (§ 13050, subd. (j).) Basin plans must be consistent with “state policy for water quality control.” (§ 13240.)

B. Federal Law

[1] In 1972, Congress enacted amendments (Pub.L. No. 92–500 (Oct. 18, 1972) 86 Stat. 816) to the Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), which, as amended in 1977, is commonly known as the Clean *620 Water Act. The Clean Water Act is a “comprehensive water quality statute designed ‘to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.’ ” (*PUD No. 1 of Jefferson County v. Washington Dept. of Ecology, supra*, 511 U.S. at p. 704, 114 S.Ct. 1900, quoting 33 U.S.C. § 1251(a).) The Act's national goal was to eliminate by the year 1985 “the discharge of pollutants into the navigable waters” of the United States. (33 U.S.C. § 1251(a)(1).) To accomplish this goal, the Act established “effluent limitations,” which are restrictions on the “quantities, rates, and concentrations of chemical, physical, biological, and other constituents”; these effluent limitations allow the discharge of pollutants only when the water has been satisfactorily treated to conform with federal water quality standards. (33 U.S.C. §§ 1311, 1362(11).)

Under the federal Clean Water Act, each state is free to enforce its own water quality laws so long as its effluent limitations are not “less stringent” than those set out in the Clean Water Act. (33 U.S.C. § 1370.) This led the California Legislature in 1972 to amend the state's Porter–Cologne Act “to ensure consistency with the requirements for state programs implementing the Federal Water Pollution Control Act.” (§ 13372.)

866 Roughly a dozen years ago, the United States Supreme Court, in *Arkansas v. Oklahoma* (1992) 503 U.S. 91, 112 S.Ct. 1046, 117 L.Ed.2d 239, described the distinct roles of the state and federal agencies in enforcing water quality: “The Clean Water Act anticipates a partnership between the States and the Federal Government, animated by a shared objective: ‘to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.’ 33 U.S.C. § 1251(a). Toward *308 this end, [the Clean Water Act] provides for two sets of water quality measures. ‘Effluent limitations’ are promulgated by the [Environmental Protection Agency (EPA)] and restrict the quantities, rates, and concentrations of specified substances which are discharged from point sources.³ See §§ 1311, 1314. ‘[W]ater quality standards’ are, in general, promulgated by the States and establish the desired condition of

a waterway. See § 1313. These standards supplement effluent limitations ‘so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.’ *EPA v. California ex rel. State Water Resources Control Bd.*, 426 U.S. 200, 205, n. 12, 96 S.Ct. 2022, 2025, n. 12, 48 L.Ed.2d 578 (1976).

*621 “The EPA provides States with substantial guidance in the drafting of water quality standards. See generally 40 CFR pt. 131 (1991) (setting forth model water quality standards). Moreover, [the Clean Water Act] requires, *inter alia*, that state authorities periodically review water quality standards and secure the EPA's approval of any revisions in the standards. If the EPA recommends changes to the standards and the State fails to comply with that recommendation, the Act authorizes the EPA to promulgate water quality standards for the State. 33 U.S.C. § 1313(c).” (*Arkansas v. Oklahoma, supra*, 503 U.S. at p. 101, 112 S.Ct. 1046.)

Part of the federal Clean Water Act is the National Pollutant Discharge Elimination System (NPDES), “[t]he primary means” for enforcing effluent limitations and standards under the Clean Water Act. (*Arkansas v. Oklahoma, supra*, 503 U.S. at p. 101, 112 S.Ct. 1046.) The NPDES sets out the conditions under which the federal EPA or a state with an approved water quality control program can issue permits for the discharge of pollutants in wastewater. (33 U.S.C. § 1342(a) & (b).) In California, wastewater discharge requirements established by the regional boards are the equivalent of the NPDES permits required by federal law. (§ 13374.)

With this federal and state statutory framework in mind, we now turn to the facts of this case.

II. FACTUAL BACKGROUND

This case involves three publicly owned treatment plants that discharge wastewater under NPDES permits issued by the Los Angeles Regional Board.

The City of Los Angeles owns and operates the Donald C. Tillman Water Reclamation Plant (Tillman Plant), which serves the San Fernando Valley. The City of Los Angeles also owns and operates the Los Angeles–Glendale Water Reclamation Plant (Los Angeles–Glendale Plant),

which processes wastewater from areas within the City of Los Angeles and the independent cities of Glendale and Burbank. Both the Tillman Plant and the Los Angeles–Glendale Plant discharge wastewater directly into the Los Angeles River, now a concrete-lined flood control channel that runs through the City of Los Angeles, ending at the Pacific Ocean. The State Board and the Los Angeles Regional Board consider the Los Angeles River to be a navigable water of the United States for purposes of the federal Clean Water Act.

The third plant, the Burbank Water Reclamation Plant (Burbank Plant), is owned and operated by the City of Burbank, ***309 serving residents and businesses within that city. The Burbank Plant discharges wastewater into the Burbank Western Wash, which drains into the Los Angeles River.

*622 All three plants, which together process hundreds of millions of gallons of sewage **867 each day, are tertiary treatment facilities; that is, the treated wastewater they release is processed sufficiently to be safe not only for use in watering food crops, parks, and playgrounds, but also for human body contact during recreational water activities such as swimming.

In 1998, the Los Angeles Regional Board issued renewed NPDES permits to the three wastewater treatment facilities under a basin plan it had adopted four years earlier for the Los Angeles River and its estuary. That 1994 basin plan contained general narrative criteria pertaining to the existing and potential future beneficial uses and water quality objectives for the river and estuary.⁴ The narrative criteria included municipal and domestic water supply, swimming and other recreational water uses, and fresh water habitat. The plan further provided: “All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.” The 1998 permits sought to reduce these narrative criteria to specific numeric requirements setting daily maximum limitations for more than 30 pollutants present in the treated wastewater, measured in milligrams or micrograms per liter of effluent.⁵

The Cities of Los Angeles and Burbank (Cities) filed appeals with the State Board, contending that achievement of the numeric requirements would be too costly when considered in light of the potential benefit to

water quality, and that the pollutant restrictions in the NPDES permits were unnecessary to meet the narrative criteria described in the basin plan. The State Board summarily denied the Cities' appeals.

Thereafter, the Cities filed petitions for writs of administrative mandate in the superior court. They alleged, among other things, that the Los Angeles Regional Board failed to comply with [sections 13241](#) and [13263](#), part of California's Porter–Cologne Act, because it did not consider the economic burden on the Cities in having to reduce substantially the pollutant content of their discharged wastewater. They also alleged that compliance with the pollutant restrictions set out in the NPDES permits issued by the regional *623 board would greatly increase their costs of treating the wastewater to be discharged into the Los Angeles River. According to the City of Los Angeles, its compliance costs would exceed \$50 million annually, representing more than 40 percent of its entire budget for operating its four wastewater treatment plants and its sewer system; the City of Burbank estimated its added costs at over \$9 million annually, a nearly 100 percent increase above its \$9.7 million annual budget for wastewater treatment.

***310 The State Board and the Los Angeles Regional Board responded that [sections 13241](#) and [13263](#) do not require consideration of costs of compliance when a regional board issues a NPDES permit that restricts the pollutant content of discharged wastewater.

The trial court stayed the contested pollutant restrictions for each of the three wastewater treatment plants. It then ruled that [sections 13241](#) and [13263](#) of California's Porter–Cologne Act required a regional board to consider costs of compliance not only when it adopts a basin or water quality plan but also when, as here, it issues an NPDES permit setting the allowable pollutant content of a treatment plant's discharged wastewater. The court found no evidence that the Los Angeles Regional Board had considered economic factors at either stage. Accordingly, the trial court granted the Cities' petitions for writs of mandate, and it ordered the Los Angeles Regional Board to vacate the contested restrictions on pollutants in the wastewater discharge permits issued to the three municipal plants here and to conduct hearings **868 to consider the Cities' costs of compliance before the board's issuance of new permits. The Los Angeles Regional Board and the

State Board filed appeals in both the Los Angeles and Burbank cases.⁶

The Court of Appeal, after consolidating the cases, reversed the trial court. It concluded that [sections 13241](#) and [13263](#) require a regional board to take into account “economic considerations” when it adopts water quality standards in a basin plan but not when, as here, the regional board sets specific pollutant restrictions in wastewater discharge permits intended to satisfy those standards. We granted the Cities' petition for review.

*624 III. DISCUSSION

A. Relevant State Statutes

The California statute governing the issuance of *wastewater permits* by a regional board is [section 13263](#), which was enacted in 1969 as part of the Porter–Cologne Act. (See 26 Cal.Rptr.3d pp. 306–307, 108 P.3d p. 865, *ante.*) [Section 13263](#) provides in relevant part: “*The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge [of wastewater]. The requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Section 13241.*” (§ 13263, *subd. (a)*, italics added.)

[Section 13241](#) states: “Each regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance; however, it is recognized that it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses. Factors to be considered by a regional board in establishing water quality objectives shall include, but not necessarily be limited to, all of the following:

***311 “(a) Past, present, and probable future beneficial uses of water.

“(b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.

“(c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.

“(d) *Economic considerations.*

“(e) The need for developing housing within the region.

“(f) The need to develop and use recycled water.” (Italics added.)

The Cities here argue that [section 13263](#)'s express reference to [section 13241](#) requires the Los Angeles Regional Board to consider [section 13241](#)'s listed factors, notably “[e]conomic considerations,” before issuing NPDES permits requiring specific pollutant reductions in discharged effluent or treated wastewater.

[2] *625 Thus, at issue is language in [section 13263](#) stating that when a regional board “prescribe[s] requirements as to the nature of any proposed discharge” of treated wastewater it must “take into consideration” certain factors including “the provisions of [Section 13241](#).” According to the Cities, this statutory language requires that a regional board make an independent evaluation of the [section 13241](#) factors, including “economic considerations,” before restricting the pollutant content in an NPDES permit. This was the view expressed in the trial court's ruling. The Court of Appeal rejected that view. It held that a regional board need consider the [section 13241](#) factors only when it adopts a basin or water quality plan, but not when, as in this case, it issues a wastewater discharge **869 permit that sets specific numeric limitations on the various chemical pollutants in the wastewater to be discharged. As explained below, the Court of Appeal was partly correct.

B. Statutory Construction

[3] When construing any statute, our task is to determine the Legislature's intent when it enacted the statute “so that we may adopt the construction that best effectuates the purpose of the law.” (*Hassan v. Mercy American River Hospital* (2003) 31 Cal.4th 709, 715, 3 Cal.Rptr.3d 623, 74 P.3d 726; *Esberg v. Union Oil Co.* (2002) 28 Cal.4th 262, 268, 121 Cal.Rptr.2d 203, 47 P.3d 1069.) In doing this, we look to the statutory language, which ordinarily is “the most reliable indicator of legislative intent.” (*Hassan, supra*, at p. 715, 3 Cal.Rptr.3d 623, 74 P.3d 726.)

As mentioned earlier, our Legislature's 1969 enactment of the Porter–Cologne Act, which sought to ensure the high quality of water in this state, predated the 1972 enactment by Congress of the precursor to the federal Clean Water Act. Included in California's original Porter–Cologne Act were [sections 13263](#) and [13241](#). [Section 13263](#) directs regional boards, when issuing wastewater discharge permits, to take into account various factors, including those set out in [section 13241](#). Listed among the [section 13241](#) factors is “[e]conomic considerations.” (§ [13241](#), subd. (d).) The plain language of [sections 13263](#) and [13241](#) indicates the Legislature's intent in 1969, when these statutes were enacted, that a regional board consider the cost of compliance when setting effluent limitations in a wastewater discharge permit.

Our construction of [sections 13263](#) and [13241](#) does not end with their plain statutory language, however. We must also analyze them in the context of the statutory scheme of which they are a part. ***[312](#) (*State Farm Mutual Automobile Ins. Co. v. Garamendi* (2004) 32 Cal.4th 1029, 1043, 12 Cal.Rptr.3d 343, 88 P.3d 71.) Like [sections 13263](#) and [13241](#), [section 13377](#) is part of the Porter–Cologne Act. But unlike the former two statutes, [section 13377](#) was *[626](#) not enacted until 1972, shortly after Congress, through adoption of the Federal Water Pollution Control Act Amendments, established a comprehensive water quality policy for the nation.

[4] [Section 13377](#) specifies that wastewater discharge permits issued by California's regional boards must meet the federal standards set by federal law. In effect, [section 13377](#) forbids a regional board's consideration of any economic hardship on the part of the permit holder if doing so would result in the dilution of the requirements set by Congress in the Clean Water Act. That act prohibits the discharge of pollutants into the navigable waters of the United States unless there is compliance with federal law (33 U.S.C. § [1311\(a\)](#)), and publicly operated wastewater treatment plants such as those before us here must comply with the act's clean water standards, regardless of cost (see *id.*, §§ [1311\(a\)](#), [\(b\)\(1\)\(B\)](#) & [\(C\)](#), [1342\(a\)\(1\)](#) & [\(3\)](#)). Because [section 13263](#) cannot authorize what federal law forbids, it cannot authorize a regional board, when issuing a wastewater discharge permit, to use compliance costs to justify pollutant restrictions that do not comply with federal clean water standards.⁷ Such a construction of [section 13263](#) would not only be inconsistent with federal

law, it would also be inconsistent with the Legislature's **[870](#) declaration in [section 13377](#) that all discharged wastewater must satisfy federal standards.⁸ This was also the conclusion of the Court of Appeal. Moreover, under the federal Constitution's supremacy clause (art. VI), a state law that conflicts with federal law is “without effect.” (*Cipollone v. Liggett Group, Inc.* (1992) 505 U.S. 504, 516, 112 S.Ct. 2608, 120 L.Ed.2d 407; *Dowhal v. SmithKline Beecham Consumer Healthcare* (2004) 32 Cal.4th 910, 923, 12 Cal.Rptr.3d 262, 88 P.3d 1.) To comport with the principles of federal supremacy, California law cannot authorize this *[627](#) state's regional boards to allow the discharge of pollutants into the navigable waters of the United States in concentrations ***[313](#) that would exceed the mandates of federal law.

Thus, in this case, whether the Los Angeles Regional Board should have complied with [sections 13263](#) and [13241](#) of California's Porter–Cologne Act by taking into account “economic considerations,” such as the costs the permit holder will incur to comply with the numeric pollutant restrictions set out in the permits, depends on whether those restrictions meet or exceed the requirements of the federal Clean Water Act. We therefore remand this matter for the trial court to resolve that issue.

C. Other Contentions

The Cities argue that requiring a regional board at the wastewater discharge permit stage to consider the permit holder's cost of complying with the board's restrictions on pollutant content in the water is consistent with federal law. In support, the Cities point to certain provisions of the federal Clean Water Act. They cite [section 1251\(a\)\(2\)](#) of title 33 United States Code, which sets, as a national goal “wherever attainable,” an interim goal for water quality that protects fish and wildlife, and [section 1313\(c\)\(2\)\(A\)](#) of the same title, which requires consideration, among other things, of waters' “use and value for navigation” when revising or adopting a “water quality standard.” (Italics added.) These two federal statutes, however, pertain not to permits for wastewater discharge, at issue here, but to establishing water quality standards, not at issue here. Nothing in the federal Clean Water Act suggests that a state is free to disregard or to weaken the federal requirements for clean water when an NPDES permit holder alleges that compliance with those requirements will be too costly.

[5] At oral argument, counsel for amicus curiae National Resources Defense Council, which argued on behalf of California's State Board and regional water boards, asserted that the federal Clean Water Act incorporates state water policy into federal law, and that therefore a regional board's consideration of economic factors to justify greater pollutant concentration in discharged wastewater would conflict with the federal act even if the specified pollutant restrictions were not less stringent than those required under federal law. We are not persuaded. The federal Clean Water Act reserves to the states significant aspects of water quality policy (33 U.S.C. § 1251(b)), and it specifically grants the states authority to “enforce any effluent limitation” that is not “*less stringent*” than the federal standard (*id.* § 1370, italics added). It does not prescribe or restrict the factors that a state may consider when exercising this reserved authority, and thus it does not prohibit *628 a state—when imposing effluent limitations that are *more stringent* than required by federal law—from taking into account the economic effects of doing so.

Also at oral argument, counsel for the Cities asserted that if the three municipal wastewater treatment facilities ceased releasing their treated wastewater into the concrete channel that makes up the Los Angeles River, it would (other than during the rainy season) contain no water at all, and thus would not be a “navigable water” of the **871 United States subject to the Clean Water Act. (See *Solid Waste Agency v. United States Army Corps of Engineers* (2001) 531 U.S. 159, 172, 121 S.Ct. 675, 148 L.Ed.2d 576 [“The term ‘navigable’ has at least the import of showing us what Congress had in mind as its authority for enacting the CWA: its traditional jurisdiction over waters that were or had been navigable in fact or which could reasonably be so made.”].) It is unclear when the Cities first raised this issue. The Court of Appeal did not discuss it in its opinion, and the Cities did not seek rehearing on this ground. (See ***314 Cal. Rules of Court, rule 28(c)(2).) Concluding that the issue is outside our grant of review, we do not address it.

CONCLUSION

Through the federal Clean Water Act, Congress has regulated the release of pollutants into our national waterways. The states are free to manage their own water quality programs so long as they do not compromise

the federal clean water standards. When enacted in 1972, the goal of the Federal Water Pollution Control Act Amendments was to *eliminate* by the year 1985 the discharge of pollutants into the nation's navigable waters. In furtherance of that goal, the Los Angeles Regional Board indicated in its 1994 basin plan on water quality the intent, insofar as possible, to remove from the water in the Los Angeles River toxic substances in amounts harmful to humans, plants, and aquatic life. What is not clear from the record before us is whether, in limiting the chemical pollutant content of wastewater to be discharged by the Tillman, Los Angeles–Glendale, and Burbank wastewater treatment facilities, the Los Angeles Regional Board acted only to implement requirements of the federal Clean Water Act or instead imposed pollutant limitations that exceeded the federal requirements. This is an issue of fact to be resolved by the trial court.

DISPOSITION

We affirm the judgment of the Court of Appeal reinstating the wastewater discharge permits to the extent that the specified numeric limitations on chemical pollutants are necessary to satisfy federal Clean Water Act requirements for treated wastewater. The Court of Appeal is directed to remand this *629 matter to the trial court to decide whether any numeric limitations, as described in the permits, are “more stringent” than required under federal law and thus should have been subject to “economic considerations” by the Los Angeles Regional Board before inclusion in the permits.

WE CONCUR: [GEORGE, C.J.](#), [BAXTER, WERDEGAR, CHIN](#), and [MORENO, JJ.](#)

Concurring Opinion by [BROWN, J.](#)

I write separately to express my frustration with the apparent inability of the government officials involved here to answer a simple question: How do the federal clean water standards (which, as near as I can determine, are the state standards) prevent the state from considering economic factors? The majority concludes that because “the supremacy clause of the United States Constitution requires state law to yield to federal law, a regional board, when issuing a wastewater discharge permit, may not consider economic factors to justify imposing pollutant

restrictions that are *less stringent* than applicable federal standards require.” (Maj. opn., *ante*, 26 Cal.Rptr.3d at p. 306, 108 P.3d at p. 864.) That seems a pretty self-evident proposition, but not a useful one. The real question, in my view, is whether the Clean Water Act prevents or prohibits the regional water board from considering economic factors to justify pollutant restrictions that *meet* the clean water standards in more cost-effective and economically efficient ways. I can see no reason why a federal law—which purports to be an example of cooperative federalism—would decree such a result. I do not think the majority’s reasoning is at fault here. Rather, the agencies involved seemed to have worked hard to make this simple question impenetrably obscure.

A brief review of the statutory framework at issue is necessary to understand my concerns.

***315 **872 I. Federal Law

“In 1972, Congress enacted the Federal Water Pollution Control Act (33 U.S.C. § 1251 *et seq.*), commonly known as the Clean Water Act (CWA) [Citation.] ... [¶] Generally, the CWA ‘prohibits the discharge of any pollutant except in compliance with one of several statutory exceptions. [Citation.]’ ... The most important of those exceptions is pollution discharge under a valid NPDES [National Pollution Discharge Elimination System] permit, which can be issued either by the Environmental Protection Agency (EPA), or by an EPA-approved state permit program such as California’s. [Citations.] NPDES permits are valid for five years. [Citation.] [¶] Under the CWA’s NPDES permit program, the states are required to develop *water quality standards*. [Citations.] A water quality standard ‘establish[es] the desired condition of a waterway.’ [Citation.] A water quality standard for any *630 given waterway, or ‘water body,’ has two components: (1) the designated beneficial uses of the water body and (2) the *water quality criteria* sufficient to protect those uses. [Citations.] [¶] Water quality criteria can be either *narrative* or *numeric*. [Citation.]” (*Communities for a Better Environment v. State Water Resources Control Bd.* (2003) 109 Cal.App.4th 1089, 1092–1093, 1 Cal.Rptr.3d 76.)

With respect to satisfying water quality standards, “a polluter must comply with *effluent limitations*. The CWA defines an effluent limitation as ‘any restriction

established by a State or the [EPA] Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance.’ [Citation.] ‘Effluent limitations are a means of *achieving* water quality standards.’ [Citation.] [¶] NPDES permits establish effluent limitations for the polluter. [Citations.] CWA’s NPDES permit system provides for a two-step process for the establishing of effluent limitations. First, the polluter must comply with *technology-based effluent limitations*, which are limitations based on the best available or practical technology for the reduction of water pollution. [Citations.] [¶] Second, the polluter must also comply with more stringent *water quality-based effluent limitations* (WQBEL’s) where applicable. In the CWA, Congress ‘supplemented the “technology-based” effluent limitations with “water quality-based” limitations “so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.’ ” [Citation.] [¶] The CWA makes WQBEL’s applicable to a given polluter whenever WQBEL’s are ‘necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations....’ [Citations.] Generally, NPDES permits must conform to state water quality laws insofar as the state laws impose more stringent pollution controls than the CWA. [Citations.] Simply put, WQBEL’s implement water quality standards.” (*Communities for a Better Environment v. State Water Resources Control Bd.*, *supra*, 109 Cal.App.4th at pp. 1093–1094, 1 Cal.Rptr.3d 76, fns. omitted.)

This case involves water quality-based effluent limitations. As set forth above, “[u]nder the CWA, states have the primary role in promulgating water quality standards.” (*Piney Run Preservation Ass’n v. Commrs. of Carroll Co.* (4th Cir.2001) 268 F.3d 255, 265, fn. 9.) “Under the CWA, the water quality standards referred to in section 301 [see 33 U.S.C. § 1311] are primarily the states’ handiwork.” ***316 (*American Paper Institute, Inc. v. U.S. Envtl. Protection Agency* (D.C.Cir.1993) 996 F.2d 346, 349 (*American Paper*).) In fact, upon the 1972 passage of the CWA, “[s]tate water quality standards in effect at the time ... were deemed to be the initial water quality benchmarks for CWA purposes.... The states were to revisit and, if *631 necessary, revise

those initial standards at least once every three years.” (*American Paper*, at p. 349.) Therefore, “once a water quality standard has been promulgated, section 301 of the CWA requires all NPDES permits for point sources to incorporate discharge limitations necessary to satisfy that standard.” (*American Paper*, at p. 350.) Accordingly, it appears that in most instances, ****873** state water quality standards are identical to the federal requirements for NPDES permits.

II. State Law

In California, pursuant to the Porter–Cologne Water Quality Control Act (*Wat.Code*, § 13000 et seq.; Stats.1969, ch. 482, § 18, p. 1051; hereafter Porter–Cologne Act), the regional water quality control boards establish water quality standards—and therefore federal requirements for NPDES permits—through the adoption of water quality control plans (basin plans). The basin plans establish water quality objectives using enumerated factors—including economic factors—set forth in *Water Code* section 13241.

In addition, as one court observed: “The Porter–Cologne Act ... established nine regional boards to prepare water quality plans (known as basin plans) and issue permits governing the discharge of waste. (*Wat.Code*, §§ 13100, 13140, 13200, 13201, 13240, 13241, 13243.) The Porter–Cologne Act identified these permits as ‘waste discharge requirements,’ and provided that the waste discharge requirements must mandate compliance with the applicable regional water quality control plan. (*Wat.Code*, §§ 13263, subd. (a), 13377, 13374.)^[¶] Shortly after Congress enacted the Clean Water Act in 1972, the California Legislature added Chapter 5.5 to the Porter–Cologne Act, for the purpose of adopting the necessary federal requirements to ensure it would obtain EPA approval to issue NPDES permits. (*Wat.Code*, § 13370, subd. (c).) As part of these amendments, the Legislature provided that the state and regional water boards ‘shall, as required or authorized by the [Clean Water Act], issue waste discharge requirements ... which apply and ensure compliance with all applicable provisions [of the Clean Water Act], together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.’ (*Wat.Code*, § 13377.) *Water Code* section 13374 provides that ‘[t]he

term “waste discharge requirements” as referred to in this division is the equivalent of the term “permits” as used in the [Clean Water Act].’^[¶] California subsequently obtained the required approval to issue NPDES permits. [Citation.] Thus, the waste discharge requirements issued by the regional water boards ordinarily also serve as NPDES permits under federal law. (*Wat.Code*, § 13374.)” (*Building Industry Assn. of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 875, 22 Cal.Rptr.3d 128.)

***632** Applying this federal-state statutory scheme, it appears that throughout this entire process, the Cities of Burbank and Los Angeles (Cities) were unable to have economic factors considered because the Los Angeles Regional Water Quality Control Board (Board)—the body responsible to enforce the statutory framework—failed to comply with its statutory mandate.

*****317** For example, as the trial court found, the Board did not consider costs of compliance when it initially established its basin plan, and hence the water quality standards. The Board thus failed to abide by the statutory requirement set forth in *Water Code* section 13241 in establishing its basin plan. Moreover, the Cities claim that the initial narrative standards were so vague as to make a serious economic analysis impracticable. Because the Board does not allow the Cities to raise their economic factors in the permit approval stage, they are effectively precluded from doing so. As a result, the Board appears to be playing a game of “gotcha” by allowing the Cities to raise economic considerations when it is not practical, but precluding them when they have the ability to do so.

Moreover, the Board acknowledges that it has neglected other statutory provisions that might have provided an additional opportunity to air these concerns. As set forth above, pursuant to the CWA, “[t]he states were to revisit and, if necessary, revise those initial standards at least once every three years—a process commonly known as triennial review. [Citation.] Triennial reviews consist of public hearings in which current water quality standards are examined to assure that they ‘protect the public health or welfare, enhance the quality of water and serve the purposes’ of the Act. [Citation.] Additionally, the CWA ****874** directs states to consider a variety of competing policy concerns during these reviews, including a waterway’s ‘use and value for public water supplies, propagation of fish and wildlife, recreational purposes,

and agricultural, industrial, and other purposes.’ ”
(*American Paper*, *supra*, 996 F.2d at p. 349.)

According to the Cities, “[t]he last time that the narrative water quality objective for toxicity contained in the Basin Plan was reviewed and modified was 1994.” The Board does not deny this claim. Accordingly, the Board has failed its duty to allow public discussion—including economic considerations—at the required intervals when making its determination of proper water quality standards.

What is unclear is why this process should be viewed as a contest. State and local agencies are presumably on the same side. The costs will be paid by taxpayers and the Board should have as much interest as any other agency in fiscally responsible environmental solutions.

*633 Our decision today arguably allows the Board to continue to shirk its statutory duties. The majority holds that when read together, [Water Code sections 13241](#), [13263](#), and [13377](#) do not allow the Board to consider economic factors when issuing NPDES permits to satisfy federal CWA requirements. (Maj. opn., *ante*, 26 Cal.Rptr.3d at pp. 311–312, 108 P.3d at pp. 869–870.) The majority then bifurcates the issue when it orders the Court of Appeal “to remand this matter to the trial court to decide whether any numeric limitations, as described in the permits, are ‘more stringent’ than required under federal law and thus should have been subject to ‘economic considerations’ by the Los Angeles Regional Board before inclusion in the permits.” (*Id.* at p. 314, 108 P.3d at p. 871.)

The majority overlooks the feedback loop established by the CWA, under which federal standards are linked to state-established water quality standards, including narrative water quality criteria. (See [33 U.S.C. § 1311\(b\)\(1\)\(C\)](#); [40 C.F.R. § 122.44\(d\)\(1\) \(2004\)](#).) Under the CWA, NPDES permit requirements include the state narrative criteria, which are incorporated into the Board's basin plan under the description “no toxins in toxic amounts.”

As far as I can determine, NPDES permits ***318 designed to achieve this narrative criteria (as well as designated beneficial uses) will usually implement the state's basin plan, while satisfying federal requirements as well.

If federal water quality standards are typically identical to state standards, it will be a rare instance that a state exceeds its own requirements and economic factors are taken into consideration.¹ In light of the Board's initial failure to consider costs of compliance and its repeated failure to conduct required triennial reviews, the result here is an unseemly bureaucratic bait-and-switch that we should not endorse. The likely outcome of the majority's decision is that the Cities will be economically burdened to meet standards imposed on them in a highly questionable manner.² In these times of tight fiscal budgets, it is difficult to imagine imposing additional financial burdens on municipalities without at least allowing them to present alternative views.

Based on the facts of this case, our opinion today appears to largely retain the status quo for the Board. If the Board can actually demonstrate that only the precise limitations at issue here, implemented in only one way, will achieve the desired water standards, perhaps its obduracy is justified. That case has yet to be made.

*634 Accordingly, I cannot conclude that the majority's decision is wrong. The analysis **875 may provide a reasonable accommodation of conflicting provisions. However, since the Board's actions “make me wanna holler and throw up both my hands,”³ I write separately to set forth my concerns and concur in the judgment —*dubitante*.⁴

All Citations

35 Cal.4th 613, 108 P.3d 862, 26 Cal.Rptr.3d 304, 60 ERC 1470, 35 Env'tl. L. Rep. 20,071, 05 Cal. Daily Op. Serv. 2861, 2005 Daily Journal D.A.R. 3870

Footnotes


* [Brown](#), J., did not participate therein.

1 Further undesignated statutory references are to the Water Code.

2 The Los Angeles water region “comprises all basins draining into the Pacific Ocean between the southeasterly boundary, located in the westerly part of Ventura County, of the watershed of Rincon Creek and a line which coincides with the

southeasterly boundary of Los Angeles County from the ocean to San Antonio Peak and follows thence the divide between San Gabriel River and Lytle Creek drainages to the divide between Sheep Creek and San Gabriel River drainages.” (§ 13200, subd. (d).)

- 3 A “point source” is “any discernable, confined and discrete conveyance” and includes “any pipe, ditch, channel ... from which pollutants ... may be discharged.” (33 U.S.C. § 1362(14).)
- 4 This opinion uses the terms “narrative criteria” or descriptions, and “numeric criteria” or effluent limitations. Narrative criteria are broad statements of desirable water quality goals in a water quality plan. For example, “no toxic pollutants in toxic amounts” would be a narrative description. This contrasts with numeric criteria, which detail specific pollutant concentrations, such as parts per million of a particular substance.
- 5 For example, the permits for the Tillman and Los Angeles–Glendale Plants limited the amount of fluoride in the discharged wastewater to 2 milligrams per liter and the amount of mercury to 2.1 micrograms per liter.
- 6 Unchallenged on appeal and thus not affected by our decision are the trial court’s rulings that (1) the Los Angeles Regional Board failed to show how it derived from the narrative criteria in the governing basin plan the specific numeric pollutant limitations included in the permits; (2) the administrative record failed to support the specific effluent limitations; (3) the permits improperly imposed daily maximum limits rather than weekly or monthly averages; and (4) the permits improperly specified the manner of compliance.
- 7 The concurring opinion misconstrues both state and federal clean water law when it describes the issue here as “whether the Clean Water Act prevents or prohibits the regional water board from considering economic factors to justify pollutant restrictions *that meet the clean water standards in more cost-effective and economically efficient ways.*” (Conc. Opn. of Brown, J., *post*, 26 Cal.Rptr.3d p. 314, 108 P.3d at p. 871, some italics added.) This case has nothing to do with meeting federal standards in more cost effective and economically efficient ways. State law, as we have said, allows a regional board to consider a permit holder’s compliance cost to *relax* pollutant concentrations, as measured by numeric standards, for pollutants in a wastewater discharge permit. (§§ 13241 & 13263.) Federal law, by contrast, as stated above in the text, “prohibits the discharge of pollutants into the navigable waters of the United States unless there is compliance with federal law (33 U.S.C. § 1311(a)), and publicly operated wastewater treatment plants such as those before us here must comply with the [federal] act’s *clean water standards, regardless of cost* (see *id.*, §§ 1311(a), (b)(1)(B) & (C), 1342(a)(1) & (3)).” (Italics added.)
- 8 As amended in 1978, section 13377 provides for the issuance of waste discharge permits that comply with federal clean water law “together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.” We do not here decide how this provision would affect the cost-consideration requirements of sections 13241 and 13263 when more stringent effluent standards or limitations in a permit are justified for some reason independent of compliance with federal law.
- 1 (But see *In the Matter of the Petition of City and County of San Francisco, San Francisco Baykeeper et al.* (Order No. WQ 95–4, Sept. 21, 1995) 1995 WL 576920.)
- 2 Indeed, given the fact that “water quality standards” in this case are composed of broadly worded components (i.e., a narrative criteria and “designated beneficial uses of the water body”), the Board possessed a high degree of discretion in setting NPDES permit requirements. Based on the Board’s past performance, a proper exercise of this discretion is uncertain.
- 3 Marvin Gaye (1971) “Inner City Blues.”
- 4 I am indebted to Judge Berzon for this useful term. (See *Credit Suisse First Boston Corp. v. Grunwald* (9th Cir.2005) 400 F.3d 1119 (conc. opn. of Berzon, J.).)

 KeyCite Yellow Flag - Negative Treatment
Distinguished by [California State Emp. Ass'n v. Trustees of Cal. State Colleges](#), Cal.App. 1 Dist., October 20, 1965

150 Cal.App.2d 671, 310 P.2d 673

GLENN D. COREY, Appellant,
v.
GOODWIN J. KNIGHT, as Governor,
etc., et al., Defendants; CLARKE GRAY,
as County Auditor, etc., Respondent.

Civ. No. 22068.
District Court of Appeal, Second
District, Division 1, California.
May 6, 1957.

HEADNOTES

(1a, 1b)

Municipal Courts § 7--Judges--Qualifications.
Under [Const., art. VI, § 23](#), declaring that “any elected judge or justice of an existing court who has served in that capacity by election or appointment for five consecutive years immediately preceding the effective date of this amendment shall be eligible to become a judge of a municipal court by which the existing court is superseded upon the establishment of said municipal court,” plaintiff was ineligible to become judge of the Municipal Court of the Ventura Judicial District where, if the words “existing court” referred to the Justice Court of Ventura Judicial District, plaintiff was ineligible because he had not served as judge of that court for five consecutive years immediately preceding November 7, 1950, the date of adoption of the constitutional amendment, since such court was not in existence before January 5, 1953, and where, if the words “existing court” referred to the Justice's Court of Ventura Township, plaintiff was ineligible because that court could not be “superseded on the establishment of said municipal court” in 1956, since it was superseded on January 5, 1953, and plaintiff became eligible as judge of the Justice Court under [Gov. Code, § 71601](#), solely because he was “the incumbent of a superseded inferior court.”

See [Cal.Jur.2d](#), Courts, § 173 et seq.

(2)

Justices of the Peace and Justice Courts § 1--Distinctions.

A justice's court of a township is not the same as a justice court of a judicial district, since the jurisdiction of a justice's court is not exclusive but may be shared with a police court, whereas the jurisdiction of a justice court is exclusive within its territorial area, the territorial area of a township is not necessarily the same as the territorial area of a judicial district, the presiding officer of a justice's court is a justice of the peace whereas the presiding officer of a justice court is a judge, and there are no qualifications for a justice of the peace whereas a judge of a justice court must either be a lawyer or have passed an examination prescribed by the Judicial Council.

(3)

Statutes § 180(2)--Construction--Executive or Departmental Construction.

Where the attorney general has interpreted a law in a written opinion and that position has been adopted by an administrative agency, the administrative interpretation of such law is entitled to respect by the courts and, unless clearly erroneous, is a significant factor to be considered in ascertaining the meaning of such law.

See [Cal.Jur.](#), Statutes, § 152.

(4)

Statutes § 152--Construction--Words and Phrases.

A word or clause in a statute is presumed to have the same meaning throughout.

(5)

Statutes § 139--Construction--Exceptions.

Exceptions in a statute are to be narrowly, not broadly, construed.

See [Cal.Jur.](#), Statutes, § 119; [Am.Jur.](#), Statutes, § 431 et seq.

(6)

Judges § 17.5--Retirement.

Under the County Employees Retirement Law of 1937 ([Gov. Code, § 31450](#) et seq.), a judge of the justice court of a judicial district who was over 70 years of age at the time of his election to such court must be retired “at the end of the first term to which he is elected and which commences on a date following his 70th birthday” ([Gov. Code, § 31671](#)), and where his term of office will end by operation of law when a municipal court is established and such

court will come into existence when it is found, pursuant to [Gov. Code, § 71043](#), subd. (c), that there are 40,000 inhabitants of the district, at that moment such judge will be compulsorily retired and entitled to retirement benefits under the County Employees Retirement Law of 1937.

SUMMARY

APPEAL from a judgment of the Superior Court of Ventura County. Charles F. Blackstock, Judge. Affirmed.

Action for declaratory relief. Judgment for defendants affirmed.

COUNSEL

Waite & Drapeau and David R. Drapeau for Appellant. Charles Kaplan and Arden T. Jensen as Amici Curiae on behalf of Appellant.

Roy A. Gustafson, District Attorney (Ventura), for Respondent.

FOUR, J.

This is an appeal from a judgment in a declaratory relief action wherein it was adjudged “that if plaintiff is Judge of the Justice Court of the Ventura Judicial District at the time when the district is found to have over 40,000 inhabitants, (1) a Municipal Court will thereupon supersede the Justice Court, (2) plaintiff will be ineligible to be Judge of the Municipal Court, (3) a vacancy will exist to be filled by *673 appointment of the Governor, (4) plaintiff will be compulsorily retired and (5) plaintiff will receive retirement benefits under the County Employees Retirement Law of 1937.”

A resume of the facts in the case is as follows: In about 1947, the Legislature requested the Judicial Council to make a survey of all courts in California exercising jurisdiction inferior to the superior court. After an extensive study the Judicial Council, in 1949, recommended to the Legislature a plan for the reorganization of such courts (Twelfth Biennial Report [1948], Judicial Council of California). The Legislature, through committees, conducted public hearings, and as a result thereof some changes and additions were made in the proposed constitutional amendments and the proposed statutes drafted by the council. The interpretation to be given to some of the words added in one of the constitutional amendments which was proposed and adopted ([art. VI, § 23](#)) is the only real

problem to be determined in this case. The language in question is contained in the “exception” section, generally referred to as the “Grandfather Clause,” the pertinent parts of which are as follows:

“No person shall be eligible to the office of a Justice of the Supreme Court, or of a district court of appeal, or of a judge of a superior court, or of a municipal court, unless he shall have been admitted to practice before the Supreme Court of the State for a period of at least five years immediately preceding his election or appointment to such office; provided, however, that any elected judge or justice of an existing court who has served in that capacity by election or appointment for five consecutive years immediately preceding the effective date of this amendment shall be eligible to become the judge of a municipal court by which the existing court is superseded upon the establishment of said municipal court or at the first election of judges thereto and for any consecutive terms thereafter for which he may be re-elected. ...”

The Legislature voted to submit the proposed constitutional amendment to the people at the general election, November 7, 1950. The proposition was Number 3 on the ballot at that time, and was adopted by the people by a large majority. At the same election, [section 11 of article VI of the Constitution](#) was amended to provide for only two types of courts inferior to the superior court, namely, justice courts and municipal courts, and further to validate the laws relating to judicial districts enacted in the legislative session of 1949, in anticipation of the adoption of the constitutional amendments. The *674 amendments provided, among other things, in substance, that each county should be divided into judicial districts and that if the population of any district were over 40,000, the district should have a municipal court, or if under 40,000, a justice court. The Legislature, by section 1 of chapter 1511, Statutes 1949, directed the board of supervisors to district their counties. The new plan was to become effective January 1, 1952, except where two or more incumbent judges would be eligible to be judges of the new court, in which case section 2 of chapter 1510, Statutes 1949, provided that they “shall not automatically succeed to judicial positions in the municipal or justice court, and the existing courts shall continue to function within the district until the first judge or judges of said municipal or justice court shall be elected by the qualified electors of the district at the first general state election held following the expiration of 90 days and qualify.”

Article VI, section 11, as amended in 1950, also contained a provision that “existing courts shall continue to function as presently organized until the first selection and qualification of the judge or judges of the municipal or justice court, at which time, unless otherwise provided by law, pending actions, trials and all pending business of existing courts shall be transferred to and become pending in the municipal or justice court established for the judicial district or city and county in which they are situated, and all records of such superseded courts shall be transferred to, and thereafter be and become records of said municipal or justice court.”

On July 6, 1944, Ventura Township was one of nine townships into which Ventura County was divided. The court of Ventura Township was a class B justice court. The justice of the peace who presided over the court died and appellant herein was appointed by the board of supervisors to fill the vacancy.

The city of San Buenaventura (hereinafter referred to as Ventura) is located in the territorial limits of Ventura Township. The charter of Ventura provides for a police court and such court was presided over by Judge B. L. Gregg, a former member of The State Bar. Appellant's original term as justice of the peace expired January 6, 1947. He was elected to that position for the term from January 6, 1947, to January 2, 1951, and was reelected to that position for the term from January 2, 1951, to January 3, 1955. On October 26, 1951, the population of the township having been found to be over 30,000 by the 1950 census, the court became a class A justice court. The boundaries of the Ventura Judicial District were *675 established as of September 4, 1951, by Ordinance Number 472 of the Board of Supervisors of Ventura County, in conformity with the Statutes of 1949. The area of the district included, but was larger than, Ventura Township. The population of the district was less than 40,000.

On January 1, 1952, there were two judicial officers of courts within the area of Ventura Judicial District, namely, appellant as justice of the peace of Ventura Township, and B. L. Gregg as judge of the police court in the city of Ventura. Both were candidates for the office of judge of the Justice Court of Ventura Judicial District at the election in 1952. Appellant was not and never has been an attorney, and had not passed any examination

prescribed by the Judicial Council. Appellant, who was over 70 years of age at the time of the election, was elected and took office as judge of the justice court on January 5, 1953, for the term ending January 5, 1959.

The Justice Court of Ojai Judicial District began functioning in January, 1952, because only one incumbent was eligible to the judgeship. The remaining four districts in Ventura County were inoperative as such, pending the election of judges. Judges were elected in 1952, and the four districts began functioning as such on January 5, 1953, or, in other words, on January 5, 1953, Ventura County had five judicial districts, each with a functioning justice court.

An action was filed in the superior court of Ventura County on July 5, 1956, for the purpose of having it declared that Ventura Judicial District had a population of over 40,000. On September 6, 1956, the trial judge of that court found that there were 40,000 or more persons in the district, and a municipal court is now in existence. Appellant contends that he is eligible to be, and that he is the judge of such municipal court now in existence. Appellant further asserts that he will continue to be a judge of the justice court if found to be ineligible to be the municipal court judge, until a municipal court judge is elected for the term beginning January 5, 1959. Respondent asserts that appellant is ineligible and he cannot pay appellant now that such municipal court is established; that appellant's term is now terminated as of September 6, 1956, the date upon which the municipal court was declared to be in existence, and appellant is compulsorily retired, and that a vacancy existed which was to be filled by appointment by the Governor.

Appellant, in his briefs and in the oral argument, has made *676 issue of the first contention heretofore mentioned, namely, that he is eligible to become judge of the municipal court of Ventura Judicial District, and no argument or authorities were presented on the other matters, and we therefore assume that the disposition of the first question will dispose of this appeal.

Honorable Charles F. Blackstock, the learned trial judge, prepared findings of fact and conclusions of law and in his conclusions set forth the applicable law. We believe that the commentary of the trial judge concisely and correctly sets forth the law and we adopt his statements in reference thereto, as follows:

“Both parties concede that if Ventura Judicial District is found to have a population of 40,000 persons and if plaintiff is eligible to be a municipal court judge, the court will begin to function immediately with plaintiff as judge. [Government Code, section 71080](#). Not being an attorney, plaintiff is eligible, if at all, only under this proviso of [section 23 of article VI of the Constitution](#):

“ [A]ny elected judge or justice of an *existing court* who has served in that capacity by election or appointment for five consecutive years immediately preceding the effective date of this amendment shall be eligible to become a judge of a municipal court by which the *existing court* is *superseded* upon the establishment of said municipal court. ...’ (Emphasis added.)

([1a]) ”The basic question is the meaning of the words ‘existing court.’ The amendment was adopted November 7, 1950. Do the words refer to a court then existing or to a court existing at the time the amendment is invoked?

“The court over which plaintiff presided on November 7, 1950, was the Justice’s Court of Ventura Township. The court over which he now presides is the Justice Court of Ventura Judicial District. If those two courts are the same court (identified by different names), plaintiff is clearly eligible regardless of the time to which the words ‘existing court’ refer.

([2]) ”A Class B Justice’s Court had jurisdiction over cases involving claims up to \$300. A justice court has jurisdiction of claims up to \$500. The jurisdiction of a justice’s court was not exclusive and, in fact, was shared in Ventura Township with the police court. The jurisdiction of the justice court is exclusive within its territorial area. The territorial area of a township was not necessarily the same as the territorial area of a judicial district and, in fact, the boundaries of the Ventura Judicial District are larger than the boundaries of *677 Ventura Township. (There were nine townships in Ventura County, whereas there are only five judicial districts.) The presiding officer of a justice’s court was a justice of the peace. The presiding officer of a justice court is a judge. There were no qualifications for a justice of the peace. A judge of a justice court must either be a lawyer or have passed an examination prescribed by the Judicial Council. The term of a justice of the peace was four years. The term of a judge

of the justice court is six years. It appears, therefore, that the two courts are different and are not the same.

“This conclusion is fortified by language used in the pertinent laws. [Article 6, section 11 of the Constitution](#) refers to the fact that ‘existing courts [in a judicial district] shall continue to function’ until the new justice court is established at which time all records of such superseded courts shall be transferred to [the] ... justice court.’ [Government Code, section 71080](#), provided that where two persons were eligible to be judge of the new justice court (as were Justice of the Peace Glenn Corey and Judge B. L. Gregg in the Ventura Judicial District), ‘such incumbents shall not automatically succeed to judicial positions [on January 1, 1952] in the ... justice court, and the existing courts shall continue to function within the district until the first judge ... of such ... justice court [is] elected [for the term beginning January 5, 1953].’ Similarly, chapter 14, Statutes of 1952, First Extraordinary Session, referred to the fact that:

“ ‘Certain Class B justices’ courts will *remain in existence* until January 5, 1953, under the inferior court reorganization program, after which time there will be no courts in the State inferior to the superior courts except municipal and justice courts.’ (Emphasis added.)

“Thus it is plain that the Justice’s Court of Ventura Township is not the same as the Justice Court of Ventura Judicial District.

([1b]) ”Which, then, is the ‘existing court’ referred to in the eligibility clause of the Constitution? If it is the Justice Court of Ventura Judicial District, plaintiff is ineligible because plaintiff has not ‘served in that capacity [that is, judge] by election or appointment for five consecutive years immediately preceding [November 7, 1950].’ This is so because that court did not exist *before* January 5, 1953. If it is the Justice’s Court of Ventura Township, plaintiff is ineligible because that court will not be ‘superseded upon the establishment of said municipal court.’ This is so because that court *678 did not exist *after* January 5, 1953 and cannot be superseded in 1956. That court was superseded on January 5, 1953, and plaintiff holds his present position pursuant to [section 71601 of the Government Code](#) which made him eligible to be judge of the justice court solely because he was ‘the incumbent of a superseded inferior court.’ In either event, plaintiff is ineligible. (Had a municipal court been established

between November 7, 1950 and January 5, 1953, plaintiff would have been eligible to be judge.)

“The conclusion that plaintiff is ineligible has been reached by the attorney general (21 Ops. Cal. Atty. Gen. 152) and by defendant county auditor. ([3]) Where the attorney general has interpreted a law in a written opinion and that position has been adopted by an administrative agency, the 'administrative application of an act is entitled to respect by the courts, and unless clearly erroneous is a significant factor to be considered in ascertaining the meaning of a statute.' *Mudd v. McColgan* (1947), 30 Cal.2d 463 [183 P.2d 10].

“Proposition 19 on the ballot in 1954 was this:

“ '**Proposed Amendment to Article VI**

“ 'Sec. 23. No person shall be eligible to the office of a justice of the Supreme Court, or of a district court of appeal, or of a judge of a superior court, or of a municipal court, unless he shall have been admitted to practice before the Supreme Court of the State for a period of at least five years immediately preceding his election or appointment to such office; provided, however, that any elected judge or justice who has served by election or appointment *as such judge or justice of a court superseded by a justice or municipal court* for five consecutive years immediately preceding *November 7, 1950, and has served continuously as a judge of such superseding court after said date until the establishment of a municipal court*, shall be eligible to become the judge of a municipal court which *supersedes* the court of *which he is judge* upon the establishment of said municipal court or at the first election of judges thereto and for any consecutive terms thereafter for which he may be re- elected. The requirement of consecutive years of judicial service shall be deemed to have been met even though interrupted by service in the armed forces of the United States during the period of war.' *679

“In the pamphlet sent to all voters, the following argument was made in favor of the proposition:

“ 'The voters of California at the 1950 general election adopted a constitutional amendment providing for the reorganization of the inferior courts of this State and reducing the number of such courts to two classes known as municipal courts and justice courts. The Constitution then required admission to practice law before the Supreme Court for at least five years before a person

is eligible to be a municipal court judge. The 1950 amendment made any elective judge or justice of an existing court superseded by a municipal court eligible to become judge if he had served in his present capacity for five consecutive years immediately preceding the effective date of the amendment. It was the intent and spirit of the amendment that experienced incumbent Justices of the Peace would be permitted to continue in office, even though their courts were changed to municipal courts without requiring that they be lawyers.

“ 'The Attorney General of California last year gave an opinion that the present Justices who are not attorneys would not be eligible to become the judges of municipal courts when such a court succeeds their justice courts.

“ 'Following the opinion of the Attorney General, both houses of the Legislature unanimously voted to submit the present amendment to the Constitution, for the reason that it was the consensus of the Legislature that incumbent Justices who qualify as to consecutive years of service should not be ineligible to continue as municipal court judges because they are not attorneys.

“ 'By adopting the present amendment, the people will remove any doubt as to the status of incumbent Justices who are not attorneys and they will be eligible to become municipal judges upon the conversion of their courts if they were eligible to do so in 1950.

“ 'There should be nothing in the administration of justice in municipal courts which requires men who have had long experience as judges to be attorneys. The Justices of the Peace have always been close to the people and responsive to their needs in matters over which they have jurisdiction, and it is felt that when a Justice has been in office for many years, he has met with approval at the hands of the people, even though he is not an attorney.

“ 'This amendment merits the approval of the people for the reasons herein set forth, in order to protect incumbent *680 Justices as to their eligibility for office, even though they are not attorneys.

“ 'J. B. Cooke,

State Assemblyman, 37th Dist.'

“Had it been passed, it would have been presumed to have been passed with full knowledge of the attorney general's opinion (*Coca-Cola Co. v. State Board of Equalization* [1945], 25 Cal.2d 918 [156 P.2d 1]) and it would have been presumed to have changed the law, rather than to have 'clarified' it. (*Loew's, Inc. v. Byram* (1938), 11 Cal.2d 746 [82 P.2d 1]). Having failed of passage, there is a presumption that the provision means what the attorney general said it means. The interpretation by the attorney general is the same as this court has reached independently.

“Plaintiff's only possible hope is that the court will, as he urges it to do, 'attach separate meanings to the two uses of the term "existing court." ' In other words, plaintiff says that 'existing court' means the Justice's Court of Ventura Township in the first part of the sentence and means the Justice Court of Ventura Judicial District in the second part of the sentence. ([4]) This construction is not reasonable because a word or clause in a statute is presumed to have the same meaning throughout. *Pitte v. Shipley* (1873), 46 Cal. 154; *Hoag v. Howard* (1880), 55 Cal. 564. ([5]) Even if reasonable, that construction would be extremely broad and exceptions are to be narrowly, not broadly, construed. *City of National City v. Fritz* (1949), 33 Cal.2d 635 [204 P.2d 7].

[(6)] “Plaintiff, as an elective officer, must be retired 'at the end of the first term to which he is elected and which commences on a date following his 70th birthday.' (*Gov. Code, § 31671.*) His term of office will end, by operation of law, when a Municipal Court is established. 'In

each district containing a population of more than 40,000 inhabitants ... there shall be a municipal court.' *Constitution, article VI, section 11.* 'Whenever a municipal court is established in a district in which a justice court was previously established ..., the justice court shall cease to exist ...' *Government Code, section 71084.* A 'vacancy in the office of judge of a municipal court shall be filled by appointment by the Governor ...' *Government Code, section 71180.* (If plaintiff were eligible, he would automatically become judge of the municipal court. If two or more incumbent judges were eligible to one position of judge of the municipal court, the court would not begin to function until January, 1959, following *681 the election of a judge in 1958. *Gov. Code, section 71080, 71081.* Neither of these situations exists in this case.) Since the necessary legislation exists for a municipal court in the Ventura Judicial District (*Gov. Code, §§ 74880-74887*), the court will come into existence when it is found, pursuant to *section 71043, subdivision (c)*, of the Government Code, that there are 40,000 inhabitants of the district. At that moment plaintiff will be compulsorily retired and will be entitled to retirement benefits under the County Employees Retirement Law of 1937.”

The judgment is affirmed.

White, P. J., and Doran, J., concurred.

Appellant's petition for a hearing by the Supreme Court was denied July 3, 1957.

7 Cal.App.5th 628
Court of Appeal,
Third District, California.

DEPARTMENT OF ALCOHOLIC
BEVERAGE CONTROL, Petitioner,
v.
ALCOHOLIC BEVERAGE CONTROL
APPEALS BOARD, Respondent;
Garfield Beach CVS, LLC et
al., Real Parties in Interest.

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Filed 1/17/2017

Synopsis

Background: Department of Alcoholic Beverage Control appealed decision of the Alcoholic Beverage Control Appeals Board, No. AB9434, which reversed suspension of store's off-sale general license for selling alcohol to a minor decoy.

Holdings: The Court of Appeal, Hoch, J., held that:

[1] Alcoholic Beverage Control rule which required that minor decoys “truthfully answer any questions about his or her age,” did not require minor decoy to truthfully respond to clerk's statement, after looking at driver's license, that “I would not have guessed it, you must get asked a lot,” as rule only required decoys to answer questions, and

[2] rule did not impose affirmative duty on minor decoy to speak up in order to clarify any mistake regarding age articulated by sales clerk.

Annulled; reinstated and remanded.

West Headnotes (15)

- [1] **Intoxicating Liquors**
🔑 Scope and extent of review in general

In the absence of a clear abuse of discretion, the courts will uphold the decision of the Department of Alcoholic Beverage Control to suspend a liquor license for violation of the liquor laws. [Cal. Const. art. 20, § 22.](#)

[Cases that cite this headnote](#)

- [2] **Intoxicating Liquors**
🔑 Direct control by state agencies
Intoxicating Liquors
🔑 Administrative officers and proceedings
Intoxicating Liquors
🔑 Judicial review and enforcement

The administration of the Alcoholic Beverage Control Act, within the scope of the purposes of that act, is initially vested in the Department of Alcoholic Beverage Control; its decisions, however, are subject to administrative review by the Alcohol Beverage Control Appeals Board, and a final order of the Board is, in turn, subject to judicial review. [Cal. Bus. & Prof. Code § 23000 et seq.](#)

[Cases that cite this headnote](#)

- [3] **Intoxicating Liquors**
🔑 Administrative officers and proceedings
Intoxicating Liquors
🔑 Judicial review and enforcement

The scope of review of the decisions of the Department of Alcoholic Beverage Control is the same in the Alcohol Beverage Control Appeals Board and the Court of Appeal. [Cal. Bus. & Prof. Code § 23090.2.](#)

[Cases that cite this headnote](#)

- [4] **Intoxicating Liquors**
🔑 Judicial review and enforcement

Court of Appeal defers to the Department of Alcoholic Beverage Control's interpretation of its own rules, since the agency is likely to be intimately familiar with regulations it authored and sensitive to the practical

implications of one interpretation over another. [Cal. Bus. & Prof. Code § 23090.2](#).

[Cases that cite this headnote](#)

[5] Intoxicating Liquors

🔑 [Judicial review and enforcement](#)

Courts generally will not depart from the Department of Alcoholic Beverage Control's contemporaneous construction of a rule enforced by the Department unless such interpretation is clearly erroneous or unauthorized. [Cal. Bus. & Prof. Code § 23090.2](#).

[Cases that cite this headnote](#)

[6] Intoxicating Liquors

🔑 [Judicial review and enforcement](#)

Decisions of the Department of Alcoholic Beverage Control are subject to review only for insufficiency of the evidence, excess of jurisdiction, errors of law, or abuse of discretion. [Cal. Bus. & Prof. Code § 23090.2](#).

[Cases that cite this headnote](#)

[7] Intoxicating Liquors

🔑 [To Minors](#)

Alcoholic Beverage Control rule which required that minor decoys “truthfully answer any questions about his or her age,” did not require minor decoy to truthfully respond to clerk's statement, after looking at driver's license, that “I would not have guessed it, you must get asked a lot,” as rule only required decoys to answer questions. [Cal. Bus. & Prof. Code § 25658\(a\)](#); [Cal. Code Regs. tit. 4, § 141\(b\)\(4\)](#).

[Cases that cite this headnote](#)

[8] Intoxicating Liquors

🔑 [To Minors](#)

Under Department of Alcoholic Beverage Control rule providing that “a decoy shall answer truthfully any questions about his or her age,” minor decoys do not need to respond

to statements of any kind, nor do they need to respond truthfully to questions other than those concerning their ages. [Cal. Bus. & Prof. Code § 25658\(a\)](#); [Cal. Code Regs. tit. 4, § 141\(b\)\(4\)](#).

[Cases that cite this headnote](#)

[9] Intoxicating Liquors

🔑 [To Minors](#)

Department of Alcoholic Beverage Control rule providing that “a decoy shall answer truthfully any questions about his or her age” does not require minor decoys to correct mistakes articulated by licensed alcohol sellers; instead, the decoys need to respond truthfully only to questions about their ages. [Cal. Bus. & Prof. Code § 25658\(a\)](#); [Cal. Code Regs. tit. 4, § 141\(b\)\(4\)](#).

[Cases that cite this headnote](#)

[10] Intoxicating Liquors

🔑 [To Minors](#)

Alcoholic Beverage Control rule regarding use of minor decoys, which allowed law enforcement to use decoys “in a fashion that promotes fairness,” did not impose affirmative duty on minor decoy to speak up in order to clarify any mistake regarding age articulated by sales clerk who stated, after looking at driver's license, that “I would not have guessed it, you must get asked a lot”; rule implement goal of fairness by imposing five specific requirements, minor decoy did not say anything untrue but rather presented accurate information in the form of his driver license, and minor decoy's silence did not involve any attempt to pressure or encourage the sale of an alcoholic beverage to him. [Cal. Bus. & Prof. Code § 25658\(a\)](#); [Cal. Code Regs. tit. 4, § 141](#).

[Cases that cite this headnote](#)

[11] Intoxicating Liquors

🔑 [Judicial review and enforcement](#)

Court of Appeal may take judicial notice of decisions of the Alcoholic Beverage Control Appeals Board.

& Prof. Code § 25658(a); Cal. Code Regs. tit. 4, § 141(b)(4).

Cases that cite this headnote

Cases that cite this headnote

[12] Intoxicating Liquors

🔑 Judicial review and enforcement

Although not bound by the decisions of the Alcoholic Beverage Control Appeals Board, Court of Appeal would take judicial notice of their decisions and consider their reasoning for persuasive value when determining whether rule regarding use of minor decoys, which required law enforcement to use minor decoys “in a fashion that promotes fairness,” was ambiguous. Cal. Code Regs. tit. 4, § 141(a).

Cases that cite this headnote

[13] Statutes

🔑 Exceptions, Limitations, and Conditions

An exception to a statute is to be narrowly construed.

Cases that cite this headnote

[14] Statutes

🔑 Exceptions, Limitations, and Conditions

When a statute specifies an exception, no others may be added under the guise of judicial construction.

Cases that cite this headnote

[15] Intoxicating Liquors

🔑 Evidence

Minor decoy's testimony in proceedings to suspend liquor store's off-sale general license was sufficient to support finding that store clerk's words regarding liquor purchase were a statement, rather than a question about decoy's age to which decoy was required to respond truthfully; decoy's testimony, including that clerk stated “I would not have guessed it, you must get asked a lot,” or words to that effect, was clear and credible. Cal. Bus.

****132 ORIGINAL PROCEEDING:** Petition for writ of review. Petition granted. Alcoholic Beverage Control Appeals Board No. AB9434.

Attorneys and Law Firms

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Opinion

HOCH, J.

***630** California Constitution, article XX, section 22, prohibits the sale of alcoholic beverages to persons under 21 years of age. (See also [Bus. & Prof. Code](#), § 25658, subd. (a)),¹ [making it a misdemeanor to sell alcohol to a person under 21 years of age]. Here, the Department of Alcoholic Beverage Control (Department) issued a 15-day suspension of an off-sale general license held by the Garfield Beach CVS LLC Longs Drug Stores California LLC, doing business as CVS Pharmacy Store 9174 (CVS) after an administrative law judge found the store clerk sold alcohol to a minor decoy.² The Alcohol Beverage Control Appeals Board (Appeals Board) reversed the suspension based on [California Code of Regulations](#), title 4, section 141 (Rule 141) that allows a law enforcement agency to use an underage decoy only “in a ‘fashion that promotes fairness.’ (*Id.*, subd. (a).) In the Appeals Board's view, the suspension was unfair because the minor decoy did not respond about his age when the store clerk looked at his driver license and remarked, “I would never have guessed it, you must get asked a lot.” To challenge the reversal

of the license suspension, the Department petitioned for a writ of review in this court. (§ 23090.)

The Department contends it correctly interprets Rule 141 to require minor decoys to answer only questions about their ages. Based on the administrative law judge's finding in this case that the store clerk's remark constituted a statement rather than a question, the Department argues its decision was legally correct and supported by substantial evidence. The Appeals Board counters Rule 141 is ambiguous and results "in confusion and manifest unfairness." And CVS argues the Department's interpretation of Rule 141 unfairly allows decoys to remain silent in the face of mistaken statements about age. According to CVS, affirming the license suspension would allow deceptive and misleading silence in the face of a store clerk's explicit mistake about the minor decoy's age.

We conclude Rule 141 is not ambiguous in requiring minor decoys to answer truthfully only questions about their ages. Because substantial evidence supports the administrative law judge's factual finding the decoy in this case was not questioned about his age, we determine as a matter of law that Rule 141 does not provide CVS with a defense to the accusation it sold an alcoholic beverage to an underage buyer. Accordingly, we annul the Appeals Board's decision.

BACKGROUND

The Department's Imposition of a 15-day License Suspension

In October 2013, the Department accused CVS of selling alcohol to an underage person at its Garfield Beach store. An administrative hearing was *632 held in February 2014, in which the administrative law judge made the following findings of fact:

CVS has held an off-sale general license to sell alcohol since June 2009, with no prior record of discipline by the Department. On June 3, 2013, Joseph Childers was 18 years old and had the appearance and mannerisms of a person under the age of 21. On that date, Childers accompanied **134 Department agents and law enforcement officers to conduct an alcoholic beverage decoy operation at the Garfield Beach CVS store. Childers entered the store at 2:30 p.m., went to the beer cooler

where he selected a 24-ounce bottle of beer, and took the beer to the checkout line. The CVS store clerk scanned the bottle of beer and asked Childers for identification. Childers handed his California driver license to the clerk. The driver license indicated Childers's date of birth and had a red stripe with white letters that stated, "AGE 21 IN 2015." In addition, the driver license had a blue stripe with white letters that stated, "PROVISIONAL UNTIL AGE 18 IN 2012."

The administrative law judge made the following factual findings: "The clerk looked at Childers's [driver license], tried to scan it, and looked at the [license] again. She then stated, 'I would not have guessed it, you must get asked a lot,' or words to that effect. The clerk's remark was framed as a statement not a question. The decoy did not say anything to the clerk in response to her remark. He thought the clerk's statement was 'casual conversation.' The decoy also testified the statement might or might not have been related to his age. Thus, in his mind it was unclear what the clerk meant by her statement. [¶] The clerk sold Childers the 24-ounce bottle of Corona beer. At no time during the transaction did the clerk ask Childers how old he was or his age. Following the sale of the beer, the decoy exited the premises." The administrative law judge found Childers's testimony at the hearing to be clear, concise, and credible. On this basis, the administrative law judge decided there was cause to suspend CVS's off-sale general license for 15 days.

In April 2014, the Department adopted the administrative law judge's proposed decision as its decision in this case. CVS appealed the decision to the Appeals Board.

The Appeals Board's Reversal of License Suspension

In January 2015, the Appeals Board issued its decision. The Appeals Board's decision relied upon its prior decision to conclude Rule 141 required the decoy to respond to the store clerk's statement upon looking at his driver license. The Appeals Board's decision emphasized the following testimony by the decoy at the administrative hearing:

*633 "[Counsel for CVS]: [A]fter the clerk made that statement to you, what did you take that statement to mean?

"A. [Childers]: Casual conversation.

“Q. And [in] that casual conversation did you see it related in any way to your age?”

“A. Yes and no.

“Q. When you say ‘Yes and no,’ what do you mean?”

“A. Yes, that maybe *I looked younger*. No, because she *thought I was older* or thought that I do it a lot, you know.”

The Appeals Board reasoned that “[w]hen the decoy believes, as here, that a clerk’s remarks are ambiguous as to his or her age, the decoy has an obligation to respond verbally and truthfully. That is the plain meaning of rule 141(a)’s language instructing that minor decoy operations must be conducted in a ‘fashion that promotes fairness.’ ” (Italics omitted.) The Appeals Board further stated that whenever “the decoy him or herself interprets a seller’s comments to *in any way* pertain to the decoy’s age, the Department should insist that decoy err on the side of responding with clarification.” On these grounds, the Appeals Board reversed the Department’s decision and rescinded the ****135** suspension of CVS’s off-sale general license.

Petition for Writ of Review

In February 2015, the Department filed in this court a petition for writ of review from the decision of the Appeals Board. We issued a writ of review in March 2015. (§ 23090.)

DISCUSSION

I

Standard of Review

[1] [2] In addition to prohibiting the sale of alcohol to minors, the California Constitution “vests the Department with broad discretion to revoke or suspend liquor licenses ‘for good cause’ if continuing the license would be ‘contrary to public welfare or morals.’ (Cal. Const., art. XX, § 22.) In the ***634** absence of a clear abuse of discretion, the courts will uphold the

Department’s decision to suspend a license for violation of the liquor laws. (E.g., *Martin v. Alcoholic Bev. etc. Appeals Bd.* (1959) 52 Cal.2d 238, 248–249 [340 P.2d 1].)” (*Provigo Corp. v. Alcoholic Beverage Control Appeals Bd.* (1994) 7 Cal.4th 561, 566, 28 Cal.Rptr.2d 638, 869 P.2d 1163 (*Provigo*).) “ ‘The administration of the Alcoholic Beverage Control Act, within the scope of the purposes of that act, is initially vested in the department. Its decisions, however, are subject to administrative review by the board and a final order of the board is, in turn, subject to judicial review.’ ” (*Caressa Camille, Inc. v. Alcoholic Beverage Control Appeals Bd.* (2002) 99 Cal.App.4th 1094, 1099, 121 Cal.Rptr.2d 758, quoting *Walsh v. Kirby* (1974) 13 Cal.3d 95, 102, 118 Cal.Rptr. 1, 529 P.2d 33.)

[3] The scope of review of the Department’s decisions is the same in the Appeals Board and this court. (*Department of Alcoholic Beverage Control v. Alcoholic Beverage Control Appeals Bd.* (2002) 100 Cal.App.4th 1066, 1071, 123 Cal.Rptr.2d 278 (*Deleuze*).) Section 23090.2 provides that review “shall not extend further than to determine, based on the whole record of the department as certified by the board, whether: [¶] (a) The department has proceeded without or in excess of its jurisdiction. [¶] (b) The department has proceeded in the manner required by law. [¶] (c) The decision of the department is supported by the findings. [¶] (d) The findings in the department’s decision are supported by substantial evidence in the light of the whole record. [¶] (e) There is relevant evidence which, in the exercise of reasonable diligence, could not have been produced or which was improperly excluded at the hearing before the department.” Section 23090.2 also excludes the power to make findings of fact from the scope of review. (*Ibid.*)

[4] [5] [6] In conducting our review, “ ‘[w]e defer to the Department’s interpretation of its own rules, since the agency is likely to be intimately familiar with regulations it authored and sensitive to the practical implications of one interpretation over another.’ (*Yamaha Corp. of America v. State Bd. of Equalization* (1998) 19 Cal.4th 1, 12 [78 Cal.Rptr.2d 1, 960 P.2d 1031], (*Yamaha Corp.*).) Courts generally will not depart from the Department’s contemporaneous construction of a rule enforced by the Department unless such interpretation is clearly erroneous or unauthorized. (*Department of Alcoholic Beverage Control v. Alcoholic Beverage Control Appeals Bd.* (2003) 109 Cal.App.4th 1687, 1696 [1 Cal.Rptr.3d 339])” (*Department of Alcoholic Beverage Control*

v. Alcoholic Beverage Control Appeals Bd. (2005) 128 Cal.App.4th 1195, 1205, 27 Cal.Rptr.3d 766.) In short, the Department's decisions are **136 “subject to review only for insufficiency of the evidence, excess of jurisdiction, errors of law, or abuse of discretion.” (*Deleuze*, at p. 1072, 123 Cal.Rptr.2d 278.)

*635 II

Rule 141

The Department contends it correctly rejected CVS's reliance on Rule 141 as providing a defense to its sale of alcohol to the underage decoy in this case. We agree.

A.

The Department's Reliance on Minor Decoys

The Department relies on minor decoy operations as an integral part of its enforcement of the constitutional and statutory prohibitions on sales of alcohol to persons under 21 years of age. (Cal. Const., art. XX, § 22; § 25658, subd. (a).) The California Supreme Court has approved of the practice, noting that “[t]he use of underage decoys to enforce laws against unlawful sales to minors clearly *promotes* rather than *hinders*” the California constitutional and statutory prohibitions on sales of alcoholic beverages to minors. (*Provigo*, *supra*, 7 Cal.4th at p. 567, 28 Cal.Rptr.2d 638, 869 P.2d 1163.)

The Business and Professions Code provides that “[p]ersons under 21 years of age may be used by peace officers in the enforcement of this section to apprehend licensees, or employees or agents of licensees, or other persons who sell or furnish alcoholic beverages to minors.” (§ 25658, subd. (f).) In pertinent part, subdivision (f) of section 25658 further provides: “Guidelines with respect to the use of persons under 21 years of age as decoys shall be adopted and published by the department in accordance with the rulemaking portion of the Administrative Procedure Act” To comply with subdivision (f) of section 25658, the Department promulgated Rule 141. (*Acapulco Restaurants, Inc. v. Alcoholic Beverage Control Appeals Bd.* (1998) 67

Cal.App.4th 575, 579, 79 Cal.Rptr.2d 126 (*Acapulco Restaurants*)). In its entirety, Rule 141 states:

“(a) A law enforcement agency may only use a person under the age of 21 years to attempt to purchase alcoholic beverages to apprehend licensees, or employees or agents of licensees who sell alcoholic beverages to minors (persons under the age of 21) and to reduce sales of alcoholic beverages to minors in a fashion that promotes fairness.

“(b) The following minimum standards shall apply to actions filed pursuant to [Business and Professions Code Section 25658](#) in which it is alleged that a minor decoy has purchased an alcoholic beverage: [¶] (1) At the time of the operation, the decoy shall be less than 20 years of age; [¶] (2) The decoy *636 shall display the appearance which could generally be expected of a person under 21 years of age, under the actual circumstances presented to the seller of alcoholic beverages at the time of the alleged offense; [¶] (3) A decoy shall either carry his or her own identification showing the decoy's correct date of birth or shall carry no identification; a decoy who carries identification shall present it upon request to any seller of alcoholic beverages; [¶] (4) *A decoy shall answer truthfully any questions about his or her age;* [¶] (5) Following any completed sale, but not later than the time a citation, if any, is issued, the peace officer directing the decoy shall make a reasonable attempt to enter the licensed premises and have the minor decoy who purchased alcoholic beverages make a face to face identification of the alleged seller of the alcoholic beverages.

**137 “(c) Failure to comply with this rule shall be a defense to any action brought pursuant to [Business and Professions Code Section 25658](#).” (Italics added.)

B.

Availability of the Rule 141 Defense

[7] The Appeals Board contends subdivision (b)(4) of Rule 141 required the minor decoy in this case to truthfully respond to the clerk's statement, “I would not have guessed it, you must get asked a lot.” Similarly, CVS argues the minor decoy's lack of response violated Rule 141 and provided a defense to the Department's accusation. The Department counters by noting the

administrative law judge made the factual finding that the CVS clerk's words to the minor decoy constituted a statement rather than a question. On this basis, the Department argues the defense supplied by Rule 141 does not apply here. Resolving these contentions requires us to construe the meaning of Rule 141.

As this court has previously explained, “Generally, the same rules governing the construction and interpretation of statutes apply to the construction and interpretation of administrative regulations. (*In re Richards* (1993) 16 Cal.App.4th 93, 97–98, 19 Cal.Rptr.2d 797.) Accordingly, ‘we begin with the fundamental rule that a court should ascertain the intent of the Legislature so as to effectuate the purpose of the law.’ [Citations.] ‘An equally basic rule of statutory construction is, however, that courts are bound to give effect to statutes according to the usual, ordinary import of the language employed in framing them.’ [Citations.] Although a court may properly rely on extrinsic aids, it should first turn to the words of the statute to determine the intent of the Legislature. [Citations.] ‘If the words of the statute are clear, the court should not add to or alter them to accomplish a *637 purpose that does not appear on the face of the statute or from its legislative history.’ (*California Teachers Assn. v. San Diego Community College Dist.* (1981) 28 Cal.3d 692, 698 [170 Cal.Rptr. 817, 621 P.2d 856].)” (*Schmidt v. Foundation Health* (1995) 35 Cal.App.4th 1702, 1710–1711, 42 Cal.Rptr.2d 172.) “The construction of an administrative regulation and its application to a given set of facts are matters of law.” (*Ibid.*, quoting *Auchmoody v. 911 Emergency Services* (1989) 214 Cal.App.3d 1510, 1517, 263 Cal.Rptr. 278.)

In enacting the Alcoholic Beverage Control Act (Act) (§ 23000 et seq.), the Legislature declared the Act “involves in the highest degree the economic, social, and moral well-being and the safety of the State and of all its people.” (§ 23001.) The Act establishes the Department “to provide a governmental organization which will ensure a strict, honest, impartial, and uniform administration and enforcement of the liquor laws throughout the State.” (§ 23049.) To that end, section 23001 declares that “[a]ll provisions of this division shall be liberally construed for the accomplishment of these purposes.”

[8] [9] Rule 141(b)(4) provides that “[a] decoy shall answer truthfully any questions about his or her age.”

The Rule's guidance is clear and unambiguous. Minor decoys do not need to respond to *statements* of any kind nor do they need to respond truthfully to *questions* other than those concerning their ages. Thus, Rule 141 does not require minor decoys to correct mistakes articulated by licensed alcohol sellers. Instead, the minor decoys need to respond truthfully only to questions about their ages. In short, Rule 141 sets forth clear, unambiguous, and fair guidance for minor decoys to follow during the Department's operations. Consequently, the Department properly construed the **138 plain language of Rule 141 in determining the minor decoy in this case was not required to respond to the clerk's statement that might have related to the decoy's age.

The Appeals Board disagrees with the Department's plain-meaning interpretation of Rule 141, asserting the Rule is ambiguous and unfair. The Appeals Board argues that “the language of Rule 141[(b)(4)] is ambiguous, and decoys lack the expertise to make a fair decision about whether a clerk's words are a ‘question’ ‘about his or her age.’ ” The Appeals Board bases its argument on the assertion that “[t]he word ‘question’ is, especially when uttered vocally as opposed to being written, not free from doubt.” In support, the Appeals Board argues the ambiguity of the word “question” is demonstrated by the need for an evidentiary hearing to determine the nature of the store clerk's communication to the minor decoy. We reject the argument.

Courts have long resolved factual issues concerning whether a spoken communication constitutes a question that invited an answer. In *638 *Rhode Island v. Innis* (1980) 446 U.S. 291, 100 S.Ct. 1682, 64 L.Ed.2d 297, the United States Supreme Court articulated a test for determining when *Miranda* advisements must be given to a suspect that “come[s] into play whenever a person in custody is subjected to either express questioning or its functional equivalent.” (*Id.* at pp. 300–301, 100 S.Ct. 1682.) The test under *Rhode Island v. Innis* requires that police officers understand not only whether they are engaging in “express questioning,” but also when their words or actions “are reasonably likely to elicit an incriminating response from the suspect.” (*Id.* at p. 301, 100 S.Ct. 1682.) The United States Supreme Court's decision establishes the unproblematic nature of distinguishing between oral communications constituting questions (and even their functional equivalents) and statements not reasonably likely to elicit an incriminating

answer. Courts even require law enforcement officers to distinguish between suggestive and nonsuggestive questions. (*People v. Saracoglu* (2007) 152 Cal.App.4th 1584, 1590, 62 Cal.Rptr.3d 418.) Here, the determination required of minor decoys is more clear than the *Rhode Island v. Innis* test or the distinction between suggestive and nonsuggestive questions because subdivision (b)(4) of Rule 141 applies *only* to questions relating to age. “Question” is not an ambiguous term and does not lead to confusion in limiting spoken communications to those involving inquiries that contemplate answers.

[10] We also reject the Appeals Board's contention Rule 141 is ambiguous because “no definition is provided as to what ‘fairness’ means or how it is to be determined.” The lack of a definition of fairness, by itself, does not render Rule 141 ambiguous. (Cf. *Nava v. Mercury Cas. Co.* (2004) 118 Cal.App.4th 803, 805, 13 Cal.Rptr.3d 816 [lack of definition does not render a term ambiguous].) Contrary to the Appeals Board's contention, Rule 141 provides specific guidance regarding how to preserve fairness in minor decoy operations. Subdivision (b) of Rule 141 implements the goal of fairness by imposing five specific requirements for every minor decoy operation. Decoys must be under the age of 20; have the appearance of a person under 21; carry their own actual identification and present that identification upon request; truthfully answer any questions about their ages; and make face-to-face identifications of the persons who sold the alcoholic beverages. (Rule 141(b)(1)-(5).) Fairness under Rule 141 is assured by a set of five expressly defined safeguards, all of which must be fulfilled during a minor decoy operation. ****139** (*Acapulco Restaurants, supra*, 67 Cal.App.4th at p. 580, 79 Cal.Rptr.2d 126.) Consequently, Rule 141's use of the word “fairness” does not render the rule ambiguous or confusing.

[11] [12] In support of the Appeals Board's argument Rule 141 is ambiguous regarding what constitutes fairness, it points to its earlier decisions in *7-Eleven, Inc./Johal Stores, Inc.* (2014) AB-9403 (*7-Eleven*), *Equilon Enterprises, LLC* (2002) AB-7845 (*Equilon*), *Lucky Stores, Inc.* (1999) AB-7227 (*Lucky*), *Southland Corp./Dandona* (***639** 1999) AB-7099 (*Southland*), and *Thrifty Payless, Inc.* (1998) AB-7050 (*Thrifty*). We may take judicial notice of decisions of the Appeals Board. (*Department of Alcoholic Beverage Control v. Alcoholic Beverage Control Appeals Bd.* (2005) 128 Cal.App.4th 1195, 1208, fn. 5, 27 Cal.Rptr.3d 766; accord *Reimel*

v. Alcoholic Beverage Control Appeals Bd. (1967) 254 Cal.App.2d 340, 62 Cal.Rptr. 54.) Thus, although we are not bound by the Appeals Board's decisions, we take judicial notice of the cited decisions and consider their reasoning for persuasive value.

Regarding agency decisions, the California Supreme Court has noted that “[w]here the meaning and legal effect of a statute is the issue, an agency's interpretation is one among several tools available to the court. Depending on the context, it may be helpful, enlightening, even convincing. It may sometimes be of little worth. [Citation.] Considered alone and apart from the context and circumstances that produce them, agency interpretations are not binding or necessarily even authoritative.” (*Yamaha Corp. of America v. State Bd. of Equalization* (1998) 19 Cal.4th 1, 7-8, 78 Cal.Rptr.2d 1, 960 P.2d 1031.) Based on our review, we conclude the Appeals Board's cited decisions vary in their persuasiveness and fidelity to Rule 141.

In *7-Eleven, supra*, AB-9403, the Appeals Board affirmed the suspension of an off-sale license based on sale to a minor decoy after the store clerk looked at the minor decoy's identification and stated, “oh, you are so young.” (*7-Eleven*, at pp. 2, 14.) In affirming the suspension, the Appeals Board concluded the minor decoy was not required to respond because the store clerk did not ask a question or indicate a mistake as to the minor decoy's age. The Appeals Board reasoned that “[t]he wor[d] ‘young’ is a subjective term, and gives no indication that the clerk has made a miscalculation and as a result believes the decoy to be over 21” years of age. (*Id.* at p. 12.) Under the reasoning of *7-Eleven*, the Appeals Board should have affirmed the license suspension in this case as well. Here, the administrative law judge found the store clerk did not ask a question of the minor decoy. And the store clerk did not clearly demonstrate confusion as to the minor's age in the statement, “I would never have guessed it, you must get asked a lot.” The minor decoy testified he thought the statement might mean either that “she thought I was older *or thought that I do it a lot*” Because the store clerk in this case made a statement akin to that in *7-Eleven*, the reasoning employed in *7-Eleven* should have led the Appeals Board to affirm the Department's decision.

We reject the reasoning contained in the remainder of the Appeals Board's earlier decisions because the reasoning in

each would require minor decoys to speak up to clarify any mistake about their ages even in the absence of a question. (*Equilon*, at p. 2 [concluding Rule 141 “was *640 violated when the decoy failed to respond to a statement by the clerk which implied that she was 21 years of age or older”], *Lucky*, at p. 4 [same where minor decoy did not respond to mistaken statement, “1978. You are 21”], and *Southland*, at pp. 6, 7 [same where decoy did not respond to statement, “You are 21”]. In each of these decisions, **140 the Appeals Board relied on the notion of fairness to craft a new requirement for Rule 141, namely the obligation of a minor decoy to respond to any indication of mistake regarding age even in the absence of a question. Rule 141, however, expressly requires minor decoys only to answer questions relating to their ages. (Rule 141(b)(4).) The Appeals Board lacks the power to add a new defense to Rule 141.

The Appeals Board's decision in *Thrifty*, *supra*, AB-7050 involved a reversal of the Board's decision based on the minor decoy's silent tendering of a driver license rather than answering the clerk's question about her age. (See *Thrifty*, at p. 6 [speculating about the minor decoy's motivation in offering her identification rather than answering about her age].) Unlike this case, *Thrifty* involved an actual question by the clerk about the minor decoy's age and is therefore inapposite in this case where the administrative law judge determined the clerk did not ask any questions. (*Id.* at pp. 5–6.) Consequently, we need not consider whether *Thrifty* was correctly decided in harmony with Rule 141.

Ultimately, we are not persuaded by the Appeals Board's prior decisions that Rule 141 is ambiguous in requiring decoys to answer truthfully only questions relating to their ages.

Next, the Appeals Board argues the principle of fairness upon which Rule 141 is founded imposes an affirmative duty on minor decoys to speak up in order to clarify any mistake regarding age articulated by the vendor. If the Department had wanted to provide license holders with a defense for mistakes about a minor decoy's age or based on a minor decoy's failure to respond to a statement by the clerk, the Department could have done so by including express language to that effect in Rule 141. However, as we explained above, the language of Rule 141 requires minor decoys to respond only to questions about their ages. We reject the Appeals Board's attempt to add a

new defense to Rule 141 that is not expressed in the rule. (*Acapulco Restaurants*, *supra*, 67 Cal.App.4th at p. 580, 79 Cal.Rptr.2d 126.)

Acapulco Restaurants involved a minor decoy operation in which the Department did not comply with Rule 141's requirement the minor decoy make a face-to-face identification of the clerk who sold the alcoholic beverage. (67 Cal.App.4th at p. 577, 79 Cal.Rptr.2d 126; see also Rule 141(b)(5).) Despite the failure to follow this express requirement *641 of Rule 141, the Department imposed and the Appeals Board affirmed a 15-day license suspension on grounds a law enforcement officer witnessed the entire transaction. (*Acapulco Restaurants*, at p. 577, 79 Cal.Rptr.2d 126.) However, the *Acapulco Restaurants* court reversed, explaining, “[t]o ignore a rule and the defense that arises from law enforcement's failure to comply with that rule is not a matter of ‘interpretation.’ What the Department has done is to unilaterally decide that rule 141[](b)(5) applies in some situations but not others, a decision that exceeds the Department's power. By its refusal to apply rule 141[](b)(5) when a police officer is present at the time of the sale, the Department has crossed the line separating the interpretation of a word or phrase on one side to the legislation of a different rule on the other, thereby substituting its judgment for that of the rulemaking authority. It might as well have said that rule 141[](b)(5) applies on Mondays but not Thursdays.” (*Acapulco Restaurants*, *supra*, 67 Cal.App.4th at p. 580, 79 Cal.Rptr.2d 126.)

[13] [14] The result in *Acapulco Restaurants* followed the well-established rule that “[a]n exception to a statute is to be narrowly construed. (Citation.) When a statute specifies an exception, no others **141 may be added under the guise of judicial construction. (Citations.)” (*Kirby v. Alcoholic Beverage Control Appeals Bd.* (1968) 267 Cal.App.2d 895, 898, 73 Cal.Rptr. 352, quoting *Lacabanne Properties, Inc. v. Department of Alcoholic Beverage Control* (1968) 261 Cal.App.2d 181, 189, 67 Cal.Rptr. 734.) Fairness does not require the new exception to be judicially grafted into Rule 141 to provide additional defenses that require a minor decoy to speak up in the absence of a question by the store clerk. As the California Supreme Court has noted, “licensees have a ready means of protecting themselves from liability by simply asking any purchasers who could possibly be minors to produce bona fide evidence of their age

and identity.” (*Provigo, supra*, 7 Cal.4th at p. 570, 28 Cal.Rptr.2d 638, 869 P.2d 1163.)

Likewise, we reject the argument made by CVS that the minor decoy's silence in response to the clerk's statement about his youthful appearance was “deceptive and misleading.” As this court has previously noted in a case involving a claim a governmental agency engaged in fraudulent concealment, “Courts uniformly distinguish between the misleading half-truth, or partial disclosure, and the case in which defendant says nothing at all. The general rule is that silence alone is not actionable.” (*Wiechmann Engineers v. State of California ex rel. Dept. Pub. Wks.* (1973) 31 Cal.App.3d 741, 751, 107 Cal.Rptr. 529.)

Here, the minor decoy did not say anything untrue. To the contrary, the minor decoy presented accurate information in the form of his driver license. Thus, the minor decoy did not engage in deceptive and misleading communication with the clerk. Notably, the California Supreme Court has rejected a claim the use of a “mature-looking” decoy constitutes an unfair practice by *642 the Department in a case in which a minor decoy “simply bought beer and wine, *without attempting to pressure or encourage the sales in any way.*” (*Provigo, supra*, 7 Cal.4th at p. 569, 28 Cal.Rptr.2d 638, 869 P.2d 1163, italics added.) The same reason applies here. The minor decoy's silence in this case did not involve any attempt to pressure or encourage the sale of an alcoholic beverage to him. The minor decoy's silence did not render the Department's operation unfair.

CVS's argument its clerk was deceived and misled by the minor decoy in this case is based on the same premise as that advanced by the Appeals Board, namely a minor decoy has a duty to speak up in response to a statement indicating a mistaken calculation of age. However, as we have explained, Rule 141 does not supply a defense based on a minor decoy's failure to respond to statements made by the clerk. Consequently, we conclude the Department properly rejected CVS's argument the minor decoy's silence rendered the operation unfair under Rule 141.

C.

Substantial Evidence Supports the Department's Decision

[15] As part of its argument Rule 141 is ambiguous, the Appeals Board asserts the minor decoy's testimony during the hearing was equally uncertain. Specifically, the Appeals Board asserts that “[t]he decoy's testimony is as ambiguous as [Rule 141], and certainly does not support the conclusion, reached by the Department, that the clerk's words were ‘[i]ndisputably a statement’ falling outside the Rule.” In light of the administrative law judge's factual finding, we disagree.

Viewed in the light most favorable to the Department's decision, we conclude substantial evidence supports the administrative law judge's decision. As the administrative law judge found, the minor decoy's **142 testimony was clear and credible. The administrative law judge also expressly found the testimony established the store clerk's communication to the minor decoy was a statement and not a question. Under section 23090.2, the Appeals Board lacks power to disregard the Department's factual findings, which includes findings made by the administrative law judge. (*Hasselbach v. Department of Alcoholic Beverage Control* (1959) 167 Cal.App.2d 662, 667, 334 P.2d 1058 [“The statement made in the opinion of the appeals board was not a finding of fact for that board is without power to make findings of fact”].) Accordingly, we reject the Appeals Board's argument the store clerk's statement might have been a question instead of a statement.

***643 DISPOSITION**

The decision of the Alcohol Beverage Control Appeals Board is annulled. The decision of the Department of Alcoholic Beverage Control is reinstated and the case is remanded to the Alcohol Beverage Control Appeals Board for further proceedings consistent with this opinion.

We concur:

BLEASE, Acting P.J.

RENNER, J.

All Citations


7 Cal.App.5th 628, 213 Cal.Rptr.3d 130, 17 Cal. Daily Op. Serv. 384, 2017 Daily Journal D.A.R. 402

Footnotes

- 1 Undesignated statutory references are to the Business and Professions Code.
- 2 The license is held by Garfield Beach CVS LLC Longs Drug Stores California LLC, doing business as CVS Pharmacy Store 9174.

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54 Cal.3d 326, 814 P.2d 1308, 285 Cal.Rptr. 66

FRANCES KINLAW et al., Plaintiffs and Appellants,

v.

THE STATE OF CALIFORNIA et al., Defendants and Respondents.

No. S014349.

Supreme Court of California

Aug 30, 1991.

SUMMARY

Medically indigent adults and taxpayers brought an action pursuant to [Code Civ. Proc., § 526a](#), against the state, alleging that it had violated [Cal. Const., art. XIII B, § 6](#) (reimbursement of local governments for state-mandated new programs), by shifting its financial responsibility for the funding of health care for the poor onto the county without providing the necessary funding, and that as a result the state had evaded its constitutionally mandated spending limits. The trial court granted summary judgment for the State after concluding plaintiffs lacked standing to prosecute the action. (Superior Court of Alameda County, No. 632120-4, Henry Ramsey, Jr., and Demetrios P. Agretelis, Judges.) The Court of Appeal, First Dist., Div. Two, Nos. A041426 and A043500, reversed.

The Supreme Court reversed the judgment of the Court of Appeal, holding the administrative procedures established by the Legislature ([Gov. Code, § 17500 et seq.](#)), which are available only to local agencies and school districts directly affected by a state mandate, were the exclusive means by which the state's obligations under [Cal. Const., art. XIII B, § 6](#), were to be determined and enforced. Accordingly, the court held plaintiffs lacked standing to prosecute the action. (Opinion by Baxter, J., with Lucas, C. J., Panelli, Kennard, and Arabian, JJ., concurring. Separate dissenting opinion by Broussard, J., with Mosk, J., concurring.)

HEADNOTES

Classified to California Digest of Official Reports

(1)

State of California § 7--Actions--State-mandated Costs--Reimbursement-- Exclusive Statutory Remedy.

[Gov. Code, § 17500 et seq.](#), creates an administrative forum for resolution of state mandate claims arising under [Cal. Const., art. XIII B, § 6](#), and establishes procedures which exist for the express purpose of avoiding multiple proceedings, judicial and administrative, addressing the same claim that a reimbursable state mandate has been created. The statutory scheme also designates the Sacramento County Superior Court as the venue for judicial actions to declare unfunded mandates invalid. It also designates the Sacramento County Superior Court as the venue for judicial actions to declare unfunded mandates invalid ([Gov. Code, § 17612](#)). In view of the comprehensive nature of the legislative scheme, and from the expressed intent, the Legislature has created what is clearly intended to be a comprehensive and exclusive procedure by which to implement and enforce [Cal. Const., art. XIII B, § 6](#).

(2)

State of California § 7--Actions--State-mandated Costs--Reimbursement-- Private Action to Enforce--Standing.

In an action by medically indigent adults and taxpayers seeking to enforce [Cal. Const., art. XIII B, § 6](#), for declaratory and injunctive relief requiring the state to reimburse the county for the cost of providing health care services to medically indigent adults who, prior to 1983, had been included in the state Medi-Cal program, the Court of Appeal erred in holding that the existence of an administrative remedy ([Gov. Code, § 17500 et seq.](#)) by which affected local agencies could enforce their constitutional right under [art. XIII B, § 6](#) to reimbursement for the cost of state mandates did not bar the action. Because the right involved was given by the Constitution to local agencies and school districts, not individuals either as taxpayers or recipients of government benefits and services, the administrative remedy was adequate fully to implement the constitutional provision. The Legislature has the authority to establish procedures for the implementation of local agency rights under [art. XIII B, § 6](#); unless the exercise of a constitutional right is unduly restricted, a court must limit enforcement to the procedures established by the Legislature. Plaintiffs' interest, although pressing, was indirect and did not differ

from the interest of the public at large in the financial plight of local government. Relief by way of reinstatement to Medi-Cal pending further action by the state was not a remedy available under the statute, and thus was not one which a court may award.

[See [Cal.Jur.3d](#), *State of California*, § 78; 7 [Witkin](#), *Summary of Cal. Law* (9th ed. 1988) *Constitutional Law*, § 112.]

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BAXTER, J.

Plaintiffs, medically indigent adults and taxpayers, seek to enforce [section 6 of article XIII B](#) (hereafter, [section 6](#)) of the California Constitution through an action for declaratory and injunctive relief. They invoked the jurisdiction of the superior court as taxpayers pursuant to [Code of Civil Procedure section 526a](#) and as persons affected by the alleged failure of the state to comply with [section 6](#). The superior court granted summary judgment for defendants State of California and Director of the Department of Health Services, after concluding that plaintiffs lacked standing to prosecute the action. On appeal, the Court of Appeal held that plaintiffs have standing and that the action is not barred by the availability of administrative remedies.

We reverse. The administrative procedures established by the Legislature, which are available only to local agencies and school districts directly affected by a state mandate, are the exclusive means by which the state's

obligations under [section 6](#) are to be determined and enforced. Plaintiffs therefore lack standing.

I State Mandates

[Section 6](#), adopted on November 6, 1979, as part of an initiative measure imposing spending limits on state and local government, also imposes on the state an obligation to reimburse local agencies for the cost of most programs and services which they must provide pursuant to a state mandate if the local agencies were not under a preexisting duty to fund the activity. It provides: *329

“Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse such local government for the costs of such program or increased level of service, except that the Legislature may, but need not, provide such subvention of funds for the following mandates:

“(a) Legislative mandates requested by the local agency affected;

“(b) Legislation defining a new crime or changing an existing definition of a crime; or

“(c) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975.”

A complementary provision, [section 3 of article XIII B](#), provides for a shift from the state to the local agency of a portion of the spending or “appropriation” limit of the state when responsibility for funding an activity is shifted to a local agency:

“The appropriations limit for any fiscal year ... shall be adjusted as follows: [¶] (a) In the event that the financial responsibility of providing services is transferred, in whole or in part, ... from one entity of government to another, then for the year in which such transfer becomes effective the appropriations limit of the transferee entity shall be increased by such reasonable amount as the said entities shall mutually agree and the appropriations limit of the transferor entity shall be decreased by the same amount.”

II Plaintiffs' Action

The underlying issue in this action is whether the state is obligated to reimburse the County of Alameda, and shift to Alameda County a concomitant portion of the state's spending limit, for the cost of providing health care services to medically indigent adults who prior to 1983 had been included in the state Medi-Cal program. Assembly Bill No. 799 (1981-1982 Reg. Sess.) (AB 799) (Stats. 1982, ch. 328, p. 1568) removed medically indigent adults from Medi-Cal effective January 1, 1983. At the time [section 6](#) was adopted, the state was funding Medi-Cal coverage for these persons without requiring any county financial contribution.

Plaintiffs initiated this action in the Alameda County Superior Court. They sought relief on their own behalf and on behalf of a class of similarly [*330](#) situated medically indigent adult residents of Alameda County. The only named defendants were the State of California, the Director of the Department of Health Services, and the County of Alameda.

In the complaint for declaratory and injunctive relief, plaintiffs sought an injunction compelling the state to restore Medi-Cal eligibility to medically indigent adults or to reimburse the County of Alameda for the cost of providing health care to those persons. They also prayed for a declaration that the transfer of responsibility from the state-financed Medi-Cal program to the counties without adequate reimbursement violated the California Constitution.¹

At the time plaintiffs initiated their action neither Alameda County, nor any other county or local agency, had filed a reimbursement claim with the Commission on State Mandates (Commission).²

Whether viewed as an action seeking restoration of Medi-Cal benefits, one to compel state reimbursement of county costs, or one for declaratory relief, therefore, the action required a determination that the enactment of AB 799 created a state mandate within the contemplation of [section 6](#). Only upon resolution of that issue favorably to plaintiffs would the state have an obligation to reimburse the county for its increased expense and shift a portion of its appropriation limit, or to reinstate Medi-Cal benefits for plaintiffs and the class they seek to represent.

The gravamen of the action is, therefore, enforcement of [section 6](#).³ [*331](#)

III Enforcement of Article XIII B, Section 6

In 1984, almost five years after the adoption of [article XIII B](#), the Legislature enacted comprehensive administrative procedures for resolution of claims arising out of [section 6](#). (§ 17500.) The Legislature did so because the absence of a uniform procedure had resulted in inconsistent rulings on the existence of state mandates, unnecessary litigation, reimbursement delays, and, apparently, resultant uncertainties in accommodating reimbursement requirements in the budgetary process. The necessity for the legislation was explained in [section 17500](#):

“The Legislature finds and declares that the existing system for reimbursing local agencies and school districts for the costs of state-mandated local programs has not provided for the effective determination of the state's responsibilities under [Section 6 of Article XIII B of the California Constitution](#). The Legislature finds and declares that the failure of the existing process to adequately and consistently resolve the complex legal questions involved in the determination of state-mandated costs has led to an increasing reliance by local agencies and school districts on the judiciary and, therefore, in order to relieve unnecessary congestion of the judicial system, *it is necessary to create a mechanism which is capable of rendering sound quasi-judicial decisions and providing an effective means of resolving disputes over the existence of state-mandated local programs.*” (Italics added.)

In part 7 of division 4 of title 2 of the Government Code, “State-Mandated Costs,” which commences with [section 17500](#), the Legislature created the Commission (§ 17525), to adjudicate disputes over the existence of a state-mandated program (§§ 17551, 17557) and to adopt procedures for submission and adjudication of reimbursement claims (§ 17553). The five-member Commission includes the Controller, the Treasurer, the Director of Finance, the Director of the Office of Planning and Research, and a public member experienced in public finance. (§ 17525.)

The legislation establishes a test-claim procedure to expeditiously resolve disputes affecting multiple agencies (§ 17554),⁴ establishes the method of [*332](#) payment of

claims (§§ 17558, 17561), and creates reporting procedures which enable the Legislature to budget adequate funds to meet the expense of state mandates (§§ 17562, 17600, 17612, subd. (a).)

Pursuant to procedures which the Commission was authorized to establish (§ 17553), local agencies⁵ and school districts⁶ are to file claims for reimbursement of state-mandated costs with the Commission (§§ 17551, 17560), and reimbursement is to be provided only through this statutory procedure. (§§ 17550, 17552.)

The first reimbursement claim filed which alleges that a state mandate has been created under a statute or executive order is treated as a “test claim.” (§ 17521.) A public hearing must be held promptly on any test claim. At the hearing on a test claim or on any other reimbursement claim, evidence may be presented not only by the claimant, but also by the Department of Finance and any other department or agency potentially affected by the claim. (§ 17553.) Any interested organization or individual may participate in the hearing. (§ 17555.)

A local agency filing a test claim need not first expend sums to comply with the alleged state mandate, but may base its claim on estimated costs. (§ 17555.) The Commission must determine both whether a state mandate exists and, if so, the amount to be reimbursed to local agencies and school districts, adopting “parameters and guidelines” for reimbursement of any claims relating to that statute or executive order. (§ 17557.) Procedures for determining whether local agencies have achieved statutorily authorized cost savings and for offsetting these savings against reimbursements are also provided. (§ 17620 et seq.) Finally, judicial review of the Commission decision is available through petition for writ of mandate filed pursuant to [Code of Civil Procedure section 1094.5](#). (§ 17559.)

The legislative scheme is not limited to establishing the claims procedure, however. It also contemplates reporting to the Legislature and to departments and agencies of the state which have responsibilities related to funding state mandates, budget planning, and payment. The parameters and guidelines adopted by the Commission must be submitted to the Controller, who is to pay subsequent claims arising out of the mandate. (§ 17558.) Executive orders mandating costs are to be accompanied by an appropriations *333 bill to cover the costs if the costs

are not included in the budget bill, and in subsequent years the costs must be included in the budget bill. (§ 17561, subds. (a) & (b).) Regular review of the costs is to be made by the Legislative Analyst, who must report to the Legislature and recommend whether the mandate should be continued. (§ 17562.) The Commission is also required to make semiannual reports to the Legislature of the number of mandates found and the estimated reimbursement cost to the state. (§ 17600.) The Legislature must then adopt a “local government claims bill.” If that bill does not include funding for a state mandate, an affected local agency or school district may seek a declaration from the superior court for the County of Sacramento that the mandate is unenforceable, and an injunction against enforcement. (§ 17612.)

Additional procedures, enacted in 1985, create a system of state-mandate apportionments to fund reimbursement. (§ 17615 et seq.)

(11) It is apparent from the comprehensive nature of this legislative scheme, and from the Legislature's expressed intent, that the exclusive remedy for a claimed violation of [section 6](#) lies in these procedures. The statutes create an administrative forum for resolution of state mandate claims, and establishes procedures which exist for the express purpose of avoiding multiple proceedings, judicial and administrative, addressing the same claim that a reimbursable state mandate has been created. The statutory scheme also designates the Sacramento County Superior Court as the venue for judicial actions to declare unfunded mandates invalid (§ 17612).

The legislative intent is clearly stated in [section 17500](#): “It is the intent of the Legislature in enacting this part to provide for the implementation of [Section 6 of Article XIII B of the California Constitution](#) and to consolidate the procedures for reimbursement of statutes specified in the Revenue and Taxation Code with those identified in the Constitution. ...” And section 17550 states: “Reimbursement of local agencies and school districts for costs mandated by the state shall be provided pursuant to this chapter.”

Finally, section 17552 provides: “This chapter shall provide *the sole and exclusive procedure* by which a local agency or school district may claim reimbursement for costs mandated by the state as required by [Section 6 of](#)

Article XIII B of the California Constitution.” (Italics added.)

In short, the Legislature has created what is clearly intended to be a comprehensive and exclusive procedure by which to implement and enforce [section 6](#). *334

IV Exclusivity

(2) Plaintiffs argued, and the Court of Appeal agreed, that the existence of an administrative remedy by which affected local agencies could enforce their right under [section 6](#) to reimbursement for the cost of state mandates did not bar this action because the administrative remedy is available only to local agencies and school districts.

The Court of Appeal recognized that the decision of the County of Alameda, which had not filed a claim for reimbursement at the time the complaint was filed, was a discretionary decision which plaintiffs could not challenge. (*Dunn v. Long Beach L. & W. Co.* (1896) 114 Cal. 605, 609, 610-611 [46 P. 607]; *Silver v. Watson* (1972) 26 Cal.App.3d 905, 909 [103 Cal.Rptr. 576]; *Whitson v. City of Long Beach* (1962) 200 Cal.App.2d 486, 506 [19 Cal.Rptr. 668]; *Elliott v. Superior Court* (1960) 180 Cal.App.2d 894, 897 [5 Cal.Rptr. 116].) The court concluded, however, that public policy and practical necessity required that plaintiffs have a remedy for enforcement of [section 6](#) independent of the statutory procedure.

The right involved, however, is a right given by the Constitution to local agencies, not individuals either as taxpayers or recipients of government benefits and services. [Section 6](#) provides that the “state shall provide a subvention of funds to reimburse ... local governments ...” (Italics added.) The administrative remedy created by the Legislature is adequate to fully implement [section 6](#). That Alameda County did not file a reimbursement claim does not establish that the enforcement remedy is inadequate. Any of the 58 counties was free to file a claim, and other counties did so. The test claim is now before the Court of Appeal. The administrative procedure has operated as intended.

The Legislature has the authority to establish procedures for the implementation of local agency rights under [section 6](#). Unless the exercise of a constitutional right is unduly restricted, the court must limit enforcement to the procedures established by the Legislature. (*People v.*

Western Air Lines, Inc. (1954) 42 Cal.2d 621, 637 [268 P.2d 723]; *Chesney v. Byram* (1940) 15 Cal.2d 460, 463 [101 P.2d 1106]; *County of Contra Costa v. State of California* (1986) 177 Cal.App.3d 62, 75 [222 Cal.Rptr. 750].)

Plaintiffs' argument that they must be permitted to enforce [section 6](#) as individuals because their right to adequate health care services has been compromised by the failure of the state to reimburse the county for the cost *335 of services to medically indigent adults is unpersuasive. Plaintiffs' interest, although pressing, is indirect and does not differ from the interest of the public at large in the financial plight of local government. Although the basis for the claim that the state must reimburse the county for its costs of providing the care that was formerly available to plaintiffs under Medi-Cal is that AB 799 created a state mandate, plaintiffs have no right to have any reimbursement expended for health care services of any kind. Nothing in [article XIII B](#) or other provision of law controls the county's expenditure of the funds plaintiffs claim must be paid to the county. To the contrary, [section 17563](#) gives the local agency complete discretion in the expenditure of funds received pursuant to [section 6](#), providing: “Any funds received by a local agency or school district pursuant to the provisions of this chapter may be used for any public purpose.”

The relief plaintiffs seek in their prayer for state reimbursement of county expenses is, in the end, a reallocation of general revenues between the state and the county. Neither public policy nor practical necessity compels creation of a judicial remedy by which individuals may enforce the right of the county to such revenues. The Legislature has established a procedure by which the county may claim any revenues to which it believes it is entitled under [section 6](#). That test-claim statute expressly provides that not only the claimant, but also “any other interested organization or individual may participate” in the hearing before the Commission (§ 17555) at which the right to reimbursement of the costs of such mandate is to be determined. Procedures for receiving any claims must “provide for presentation of evidence by the claimant, the Department of Finance and any other affected department or agency, and any other interested person.” (§ 17553. Italics added.) Neither the county nor an interested individual is without an opportunity to be heard on these questions. These procedures are both adequate and exclusive.⁷

The alternative relief plaintiffs seek-reinstatement to Medi-Cal pending further action by the state-is not a remedy available under the statute, and thus is not one which this court may award. The remedy for the failure to fund a program is a declaration that the mandate is unenforceable. That relief is available only after the Commission has determined that a mandate exists *336 and the Legislature has failed to include the cost in a local government claims bill, and only on petition by the county. (§ 17612.)⁸

Moreover, the judicial remedy approved by the Court of Appeal permits resolution of the issues raised in a state mandate claim without the participation of those officers and individuals the Legislature deems necessary to a full and fair exposition and resolution of the issues. Neither the Controller nor the Director of Finance was named a defendant in this action. The Treasurer and the Director of the Office of Planning and Research did not participate. All of these officers would have been involved in determining the question as members of the Commission, as would the public member of the Commission. The judicial procedures were not equivalent to the public hearing required on test claims before the Commission by section 17555. Therefore, other affected departments, organizations, and individuals had no opportunity to be heard.⁹

Finally, since a determination that a state mandate has been created in a judicial proceeding rather than one before the Commission does not trigger the procedures for creating parameters and guidelines for payment of claims, or for inclusion of estimated costs in the state budget, there is no source of funds available for compliance with the judicial decision other than the appropriations for the Department of Health Services. Payment from those funds can only be at the expense of another program which the department is obligated to fund. No public policy supports, let alone requires, this result.

The superior court acted properly in dismissing this action.

The judgment of the Court of Appeal is reversed.

Lucas, C. J., Panelli, J., Kennard, J., and Arabian, J., concurred.

BROUSSARD, J.

I dissent. For nine years the Legislature has defied the mandate of article XIII B of the California Constitution (hereafter article XIII B). Having transferred responsibility for the care of medically indigent adults (MIA's) to county governments, the Legislature has failed to provide the counties with sufficient money to meet this responsibility, yet the *337 Legislature computes its own appropriations limit as if it fully funded the program. The majority, however, declines to remedy this violation because, it says, the persons most directly harmed by the violation-the medically indigent who are denied adequate health care-have no standing to raise the matter. I disagree, and will demonstrate that (1) plaintiffs have standing as citizens to seek a declaratory judgment to determine whether the state is complying with its constitutional duty under article XIII B; (2) the creation of an administrative remedy whereby counties and local districts can enforce article XIII B does not deprive the citizenry of its own independent right to enforce that provision; and (3) even if plaintiffs lacked standing, our recent decision in *Dix v. Superior Court* (1991) 53 Cal.3d 442 [279 Cal.Rptr. 834, 807 P.2d 1063] permits us to reach and resolve any significant issue decided by the Court of Appeal and fully briefed and argued here. I conclude that we should reach the merits of the appeal.

On the merits, I conclude that the state has not complied with its constitutional obligation under article XIII B. To prevent the state from avoiding the spending limits imposed by article XIII B, section 6 of that article prohibits the state from transferring previously state-financed programs to local governments without providing sufficient funds to meet those burdens. In 1982, however, the state excluded the medically indigent from its Medi-Cal program, thus shifting the responsibility for such care to the counties. Subvention funds provided by the state were inadequate to reimburse the counties for this responsibility, and became less adequate every year. At the same time, the state continued to compute its spending limit as if it fully financed the entire program. The result is exactly what article XIII B was intended to prevent: the state enjoys a falsely inflated spending limit; the county is compelled to assume a burden it cannot afford; and the medically indigent receive inadequate health care.

I. Facts and Procedural History

Plaintiffs-citizens, taxpayers, and persons in need of medical care-allege that the state has shifted its financial responsibility for the funding of health care for MIA's to the counties without providing the necessary funding and without any agreement transferring appropriation limits, and that as a result the state is violating [article XIII B](#). Plaintiffs further allege they and the class they claim to represent cannot, consequently, obtain adequate health care from the County of Alameda, which lacks the state funding to provide it. The county, although nominally a defendant, aligned [*338](#) itself with plaintiffs. It admits the inadequacy of its program to provide medical care for MIA's but blames the absence of state subvention funds.¹

At hearings below, plaintiffs presented uncontradicted evidence regarding the enormous impact of these statutory changes upon the finances and population of Alameda County. That county now spends about \$40 million annually on health care for MIA's, of which the state reimburses about half. Thus, since [article XIII B](#) became effective, Alameda County's obligation for the health care of MIA's has risen from zero to more than \$20 million per year. The county has inadequate funds to discharge its new obligation for the health care of MIA's; as a result, according to the Court of Appeal, uncontested evidence from medical experts presented below shows that, "The delivery of health care to the indigent in Alameda County is in a state of shambles; the crisis cannot be overstated" "Because of inadequate state funding, some Alameda County residents are dying, and many others are suffering serious diseases and disabilities, because they cannot obtain adequate access to the medical care they need" "The system is clogged to the breaking point. ... All community clinics ... are turning away patients." "The funding received by the county from the state for MIAs does not approach the actual cost of providing health care to the MIAs. As a consequence, inadequate resources available to county health services jeopardize the lives and health of thousands of people"

The trial court acknowledged that plaintiffs had shown irreparable injury, but denied their request for a preliminary injunction on the ground that they could not prevail in the action. It then granted the state's motion for summary judgment. Plaintiffs appealed from both decisions of the trial court.

The Court of Appeal consolidated the two appeals and reversed the rulings below. It concluded that plaintiffs had

standing to bring this action to enforce the constitutional spending limit of [article XIII B](#), and that the action is not barred by the existence of administrative remedies available to counties. It then held that the shift of a portion of the cost of medical indigent care by the state to Alameda County constituted a state-mandated new program under the provisions of [article XIII B](#), which triggered that article's provisions requiring a subvention of funds by the state to reimburse Alameda [*339](#) County for the costs of such program it was required to assume. The judgments denying a preliminary injunction and granting summary judgment for defendants were reversed. We granted review.

II. Standing

A. Plaintiffs have standing to bring an action for declaratory relief to determine whether the state is complying with [article XIII B](#).

Plaintiffs first claim standing as taxpayers under [Code of Civil Procedure section 526a](#), which provides that: "An action to obtain a judgment, restraining and preventing any illegal expenditure of, waste of, or injury to, the estate, funds, or other property of a county ..., may be maintained against any officer thereof, or any agent, or other person, acting in its behalf, either by a citizen resident therein, or by a corporation, who is assessed for and is liable to pay, or, within one year before the commencement of the action, has paid, a tax therein. ..." As in [Common Cause v. Board of Supervisors](#) (1989) 49 Cal.3d 432, 439 [261 Cal.Rptr. 574, 777 P.2d 610], however, it is "unnecessary to reach the question whether plaintiffs have standing to seek an injunction under [Code of Civil Procedure section 526a](#), because there is an independent basis for permitting them to proceed." Plaintiffs here seek a declaratory judgment that the transfer of responsibility for MIA's from the state to the counties without adequate reimbursement violates [article XIII B](#). A declaratory judgment that the state has breached its duty is essentially equivalent to an action in mandate to compel the state to perform its duty. (See [California Assn. of Psychology Providers v. Rank](#) (1990) 51 Cal.3d 1, 9 [270 Cal.Rptr. 796, 793 P.2d 2], which said that a declaratory judgment establishing that the state has a duty to act provides relief equivalent to mandamus, and makes issuance of the writ unnecessary.) Plaintiffs further seek a mandatory injunction requiring that the state pay the health costs of MIA's under the Medi-Cal program until the state

meets its obligations under [article XIII B](#). The majority similarly characterize plaintiffs' action as one comparable to mandamus brought to enforce [section 6 of article XIII B](#).

We should therefore look for guidance to cases that discuss the standing of a party seeking a writ of mandate to compel a public official to perform his or her duty.² Such an action may be brought by any person “beneficially interested” in the issuance of the writ. ([Code Civ. Proc., § 1086](#).) In *Carsten* *340 v. *Psychology Examining Com.* (1980) 27 Cal.3d 793, 796 [166 Cal.Rptr. 844, 614 P.2d 276], we explained that the “requirement that a petitioner be 'beneficially interested' has been generally interpreted to mean that one may obtain the writ only if the person has some special interest to be served or some particular right to be preserved or protected over and above the interest held in common with the public at large.” We quoted from Professor Davis, who said, “One who is in fact adversely affected by governmental action should have standing to challenge that action if it is judicially reviewable.” (Pp. 796-797, quoting 3 Davis, *Administrative Law Treatise* (1958) p. 291.) Cases applying this standard include *Stocks v. City of Irvine* (1981) 114 Cal.App.3d 520 [170 Cal.Rptr. 724], which held that low-income residents of Los Angeles had standing to challenge exclusionary zoning laws of suburban communities which prevented the plaintiffs from moving there; *Taschner v. City Council*, *supra*, 31 Cal.App.3d 48, which held that a property owner has standing to challenge an ordinance which may limit development of the owner's property; and *Felt v. Waughop* (1924) 193 Cal. 498 [225 P. 862], which held that a city voter has standing to compel the city clerk to certify a correct list of candidates for municipal office. Other cases illustrate the limitation on standing: *Carsten v. Psychology Examining Com.*, *supra*, 27 Cal.3d 793, held that a member of the committee who was neither seeking a license nor in danger of losing one had no standing to challenge a change in the method of computing the passing score on the licensing examination; *Parker v. Bowron* (1953) 40 Cal.2d 344 [254 P.2d 6] held that a union official who was neither a city employee nor a city resident had no standing to compel a city to follow a prevailing wage ordinance; and *Dunbar v. Governing Board* (1969) 275 Cal.App.2d 14 [79 Cal.Rptr. 662] held that a member of a student organization had standing to challenge a college district's rule barring a speaker from campus, but persons who merely planned to hear him speak did not.

No one questions that plaintiffs are affected by the lack of funds to provide care for MIA's. Plaintiffs, except for plaintiff Rabinowitz, are not merely citizens and taxpayers; they are medically indigent persons living in Alameda County who have been and will be deprived of proper medical care if funding of MIA programs is inadequate. Like the other plaintiffs here, *341 plaintiff Kinlaw, a 60-year-old woman with diabetes and hypertension, has no health insurance. Plaintiff Spier has a chronic back condition; inadequate funding has prevented him from obtaining necessary diagnostic procedures and physiotherapy. Plaintiff Tsosie requires medication for allergies and arthritis, and claims that because of inadequate funding she cannot obtain proper treatment. Plaintiff King, an epileptic, says she was unable to obtain medication from county clinics, suffered seizures, and had to go to a hospital. Plaintiff “Doe” asserts that when he tried to obtain treatment for AIDS-related symptoms, he had to wait four to five hours for an appointment and each time was seen by a different doctor. All of these are people personally dependent upon the quality of care of Alameda County's MIA program; most have experienced inadequate care because the program was underfunded, and all can anticipate future deficiencies in care if the state continues its refusal to fund the program fully.

The majority, however, argues that the county has no duty to use additional subvention funds for the care of MIA's because under [Government Code section 17563](#) “[a]ny funds received by a local agency ... pursuant to the provisions of this chapter may be used for any public purpose.” Since the county may use the funds for other purposes, it concludes that MIA's have no special interest in the subvention.³

This argument would be sound if the county were already meeting its obligations to MIA's under [Welfare and Institutions Code section 17000](#). If that were the case, the county could use the subvention funds as it chose, and plaintiffs would have no more interest in the matter than any other county resident or taxpayer. But such is not the case at bar. Plaintiffs here allege that the county is not complying with its duty, mandated by [Welfare and Institutions Code section 17000](#), to provide health care for the medically indigent; the county admits its failure but pleads lack of funds. Once the county receives adequate funds, it must perform its statutory duty under [section 17000 of the Welfare and Institutions Code](#). If it refused, an action in mandamus would lie to compel performance.

(See *Mooney v. Pickett* (1971) 4 Cal.3d 669 [94 Cal.Rptr. 279, 483 P.2d 1231].) In fact, the county has made clear throughout this litigation that it would use the subvention funds to provide care for MIA's. The majority's conclusion that plaintiffs lack a special, beneficial interest in the state's compliance with [article XIII B](#) ignores the practical realities of health care funding.

Moreover, we have recognized an exception to the rule that a plaintiff must be beneficially interested. "Where the question is one of public right *342 and the object of the mandamus is to procure the enforcement of a public duty, the relator need not show that he has any legal or special interest in the result, since it is sufficient that he is interested as a citizen in having the laws executed and the duty in question enforced." (*Bd. of Soc. Welfare v. County of L. A.* (1945) 27 Cal.2d 98, 100-101 [162 P.2d 627].) We explained in *Green v. Obledo* (1981) 29 Cal.3d 126, 144 [172 Cal.Rptr. 206, 624 P.2d 256], that this "exception promotes the policy of guaranteeing citizens the opportunity to ensure that no governmental body impairs or defeats the purpose of legislation establishing a public right. ... It has often been invoked by California courts. [Citations.]"

Green v. Obledo presents a close analogy to the present case. Plaintiffs there filed suit to challenge whether a state welfare regulation limiting deductibility of work-related expenses in determining eligibility for aid to families with dependent children (AFDC) assistance complied with federal requirements. Defendants claimed that plaintiffs were personally affected only by a portion of the regulation, and had no standing to challenge the balance of the regulation. We replied that "[t]here can be no question that the proper calculation of AFDC benefits is a matter of public right [citation], and plaintiffs herein are certainly citizens seeking to procure the enforcement of a public duty. [Citation.] It follows that plaintiffs have standing to seek a writ of mandate commanding defendants to cease enforcing [the regulation] in its entirety." (29 Cal.3d at p. 145.)

We again invoked the exception to the requirement for a beneficial interest in *Common Cause v. Board of Supervisors*, *supra*, 49 Cal.3d 432. Plaintiffs in that case sought to compel the county to deputize employees to register voters. We quoted *Green v. Obledo*, *supra*, 29 Cal.3d 126, 144, and concluded that "[t]he question in this case involves a public right to voter outreach

programs, and plaintiffs have standing as citizens to seek its vindication." (49 Cal.3d at p. 439.) We should reach the same conclusion here.

B. *Government Code sections 17500-17630 do not create an exclusive remedy which bars citizen-plaintiffs from enforcing article XIII B.*

Four years after the enactment of [article XIII B](#), the Legislature enacted [Government Code sections 17500 through 17630](#) to implement [article XIII B, section 6](#). These statutes create a quasi-judicial body called the Commission on State Mandates, consisting of the state Controller, state Treasurer, state Director of Finance, state Director of the Office of Planning and Research, and one public member. The commission has authority to "hear and decide upon [any] claim" by a local government that it "is entitled to be reimbursed by the state" for costs under [article XIII B](#). (*Gov. Code*, § 17551, *343 subd. (a).) Its decisions are subject to review by an action for administrative mandamus in the superior court. (See *Gov. Code*, § 17559.)

The majority maintains that a proceeding before the Commission on State Mandates is the exclusive means for enforcement of [article XIII B](#), and since that remedy is expressly limited to claims by local agencies or school districts (*Gov. Code*, § 17552), plaintiffs lack standing to enforce the constitutional provision.⁴ I disagree, for two reasons.

First, [Government Code section 17552](#) expressly addressed the question of exclusivity of remedy, and provided that "[t]his chapter shall provide the sole and exclusive procedure by which *a local agency or school district* may claim reimbursement for costs mandated by the state as required by [Section 6 of Article XIII B of the California Constitution](#)." (Italics added.) The Legislature was aware that local agencies and school districts were not the only parties concerned with state mandates, for in [Government Code section 17555](#) it provided that "any other interested organization or individual may participate" in the commission hearing. Under these circumstances the Legislature's choice of words—"the sole and exclusive procedure by which a local agency or school district may claim reimbursement"—limits the procedural rights of those claimants only, and does not affect rights of other persons. *Expressio unius est exclusio alterius*—"the expression of certain things in a

statute necessarily involves exclusion of other things not expressed.” (*Henderson v. Mann Theatres Corp.* (1976) 65 Cal.App.3d 397, 403 [135 Cal.Rptr. 266].)

The case is similar in this respect to *Common Cause v. Board of Supervisors*, *supra*, 49 Cal.3d 432. Here defendants contend that the counties' right of action under [Government Code sections 17551-17552](#) impliedly excludes *344 any citizen's remedy; in *Common Cause* defendants claimed the Attorney General's right of action under [Elections Code section 304](#) impliedly excluded any citizen's remedy. We replied that “the plain language of [section 304](#) contains no limitation on the right of private citizens to sue to enforce the section. To infer such a limitation would contradict our long-standing approval of citizen actions to require governmental officials to follow the law, expressed in our expansive interpretation of taxpayer standing [citations], and our recognition of a 'public interest' exception to the requirement that a petitioner for writ of mandate have a personal beneficial interest in the proceedings [citations].” (49 Cal.3d at p. 440, fn. omitted.) Likewise in this case the plain language of [Government Code sections 17551-17552](#) contain no limitation on the right of private citizens, and to infer such a right would contradict our long-standing approval of citizen actions to enforce public duties.

The United States Supreme Court reached a similar conclusion in *Rosado v. Wyman* (1970) 397 U.S. 397 [25 L.Ed.2d 442, 90 S.Ct. 1207]. In that case New York welfare recipients sought a ruling that New York had violated federal law by failing to make cost-of-living adjustments to welfare grants. The state replied that the statute giving the Department of Health, Education and Welfare authority to cut off federal funds to noncomplying states constituted an exclusive remedy. The court rejected the contention, saying that “[w]e are most reluctant to assume Congress has closed the avenue of effective judicial review to those individuals most directly affected by the administration of its program.” (P. 420 [25 L.Ed.2d at p. 460].) The principle is clear: the persons actually harmed by illegal state action, not only some administrator who has no personal stake in the matter, should have standing to challenge that action.

Second, [article XIII B](#) was enacted to protect taxpayers, not governments. [Sections 1 and 2 of article XIII B](#) establish strict limits on state and local expenditures, and require the refund of all taxes collected in excess of those

limits. [Section 6 of article XIII B](#) prevents the state from evading those limits and burdening county taxpayers by transferring financial responsibility for a program to a county, yet counting the cost of that program toward the limit on state expenditures.

These provisions demonstrate a profound distrust of government and a disdain for excessive government spending. An exclusive remedy under which only governments can enforce [article XIII B](#), and the taxpayer-citizen can appear only if a government has first instituted proceedings, is inconsistent with the ethos that led to [article XIII B](#). The drafters of [article XIII B](#) and the voters who enacted it would not accept that the state Legislature—the principal body regulated by the article—could establish a procedure *345 under which the only way the article can be enforced is for local governmental bodies to initiate proceedings before a commission composed largely of state financial officials.

One obvious reason is that in the never-ending attempts of state and local government to obtain a larger proportionate share of available tax revenues, the state has the power to coerce local governments into foregoing their rights to enforce [article XIII B](#). An example is the Brown-Presley Trial Court Funding Act ([Gov. Code, § 77000 et seq.](#)), which provides that the county's acceptance of funds for court financing may, in the discretion of the Governor, be deemed a waiver of the counties' rights to proceed before the commission on all claims for reimbursement for state-mandated local programs which existed and were not filed prior to passage of the trial funding legislation.⁵ The ability of state government by financial threat or inducement to persuade counties to waive their right of action before the commission renders the counties' right of action inadequate to protect the public interest in the enforcement of [article XIII B](#).

The facts of the present litigation also demonstrate the inadequacy of the commission remedy. The state began transferring financial responsibility for MIA's to the counties in 1982. Six years later no county had brought a proceeding before the commission. After the present suit was filed, two counties filed claims for 70 percent reimbursement. Now, nine years after the 1982 legislation, the counties' claims are pending before the Court of Appeal. After that court acts, and we decide whether to review its decision, the matter may still have to go back to the commission for hearings to *346 determine

the amount of the mandate—which is itself an appealable order. When an issue involves the life and health of thousands, a procedure which permits this kind of delay is not an adequate remedy.

In sum, effective, efficient enforcement of [article XIII B](#) requires that standing to enforce that measure be given to those harmed by its violation—in this case, the medically indigent—and not be vested exclusively in local officials who have no personal interest at stake and are subject to financial and political pressure to overlook violations.

C. Even if plaintiffs lack standing this court should nevertheless address and resolve the merits of the appeal.

Although ordinarily a court will not decide the merits of a controversy if the plaintiffs lack standing (see [McKinny v. Board of Trustees](#) (1982) 31 Cal.3d 79, 90 [181 Cal.Rptr. 549, 642 P.2d 460]), we recognized an exception to this rule in our recent decision in [Dix v. Superior Court](#), *supra*, 53 Cal.3d 442 (hereafter *Dix*). In *Dix*, the victim of a crime sought to challenge the trial court's decision to recall a sentence under [Penal Code section 1170](#). We held that only the prosecutor, not the victim of the crime, had standing to raise that issue. We nevertheless went on to consider and decide questions raised by the victim concerning the trial court's authority to recall a sentence under [Penal Code section 1170](#), subdivision (d). We explained that the sentencing issues “are significant. The case is fully briefed and all parties apparently seek a decision on the merits. Under such circumstances, we deem it appropriate to address [the victim's] sentencing arguments for the guidance of the lower courts. Our discretion to do so under analogous circumstances is well settled. [Citing cases explaining when an appellate court can decide an issue despite mootness.]” (53 Cal.3d at p. 454.) In footnote we added that “Under article VI, section 12, subdivision (b) of the California Constitution ..., we have jurisdiction to 'review the *decision of a Court of Appeal* in any cause.' (Italics added.) Here the Court of Appeal's decision addressed two issues—standing and merits. Nothing in article VI, section 12(b) suggests that, having rejected the Court of Appeal's conclusion on the preliminary issue of standing, we are foreclosed from 'review [ing]' the second subject addressed and resolved in its decision.” (Pp. 454-455, fn. 8.)

I see no grounds on which to distinguish *Dix*. The present case is also one in which the Court of Appeal decision addressed both standing and merits. It is fully briefed.

Plaintiffs and the county seek a decision on the merits. While the state does not seek a decision on the merits in this proceeding, its appeal of the superior court decision in the mandamus proceeding brought by the County of Los Angeles (see maj. opn., *ante*, p. 330, fn. 2) shows that it is not opposed to an appellate decision on the merits. *347

The majority, however, notes that various state officials—the Controller, the Director of Finance, the Treasurer, and the Director of the Office of Planning and Research—did not participate in this litigation. Then in a footnote, the majority suggests that this is the reason they do not follow the *Dix* decision. (Maj. opn., *ante*, p. 336, fn. 9.) In my view, this explanation is insufficient. The present action is one for declaratory relief against the state. It is not necessary that plaintiffs also sue particular state officials. (The state has never claimed that such officials were necessary parties.) I do not believe we should refuse to reach the merits of this appeal because of the nonparticipation of persons who, if they sought to participate, would be here merely as amici curiae.⁶

The case before us raises no issues of departmental policy. It presents solely an issue of law which this court is competent to decide on the briefs and arguments presented. That issue is one of great significance, far more significant than any raised in *Dix*. Judges rarely recall sentencing under [Penal Code section 1170](#), subdivision (d); when they do, it generally affects only the individual defendant. In contrast, the legal issue here involves immense sums of money and affect budgetary planning for both the state and counties. State and county governments need to know, as soon as possible, what their rights and obligations are; legislators considering proposals to deal with the current state and county budget crisis need to know how to frame legislation so it does not violate [article XIII B](#). The practical impact of a decision on the people of this state is also of great importance. The failure of the state to provide full subvention funds and the difficulty of the county in filling the gap translate into inadequate staffing and facilities for treatment of thousands of persons. Until the constitutional issues are resolved the legal uncertainties may inhibit both levels of government from taking the steps needed to address this problem. A delay of several years until the Los Angeles case is resolved could result in pain, hardship, or even death for many people. I conclude that, whether or not plaintiffs have standing, this court should address and resolve the merits of the appeal.

D. Conclusion as to standing.

As I have just explained, it is not necessary for plaintiffs to have standing for us to be able to decide the merits of the appeal. Nevertheless, I conclude *348 that plaintiffs have standing both as persons “beneficially interested” under [Code of Civil Procedure section 1086](#) and under the doctrine of *Green v. Obledo, supra*, 29 Cal.3d 126, to bring an action to determine whether the state has violated its duties under [article XIII B](#). The remedy given local agencies and school districts by [Government Code sections 17500- 17630](#) is, as [Government Code section 17552](#) states, the exclusive remedy by which those bodies can challenge the state's refusal to provide subvention funds, but the statute does not limit the remedies available to individual citizens.

III. Merits of the Appeal

A. State funding of care for MIA's.

[Welfare and Institutions Code section 17000](#) requires every county to “relieve and support” all indigent or incapacitated residents, except to the extent that such persons are supported or relieved by other sources.⁷ From 1971 until 1982, and thus at the time [article XIII B](#) became effective, counties were not required to pay for the provision of health services to MIA's, whose health needs were met through the state-funded Medi-Cal program. Since the medical needs of MIA's were fully met through other sources, the counties had no duty under [Welfare and Institutions Code section 17000](#) to meet those needs. While the counties did make general contributions to the Medi-Cal program (which covered persons other than MIA's) from 1971 until 1978, at the time [article XIII B](#) became effective in 1980 the counties were not required to make any financial contributions to Medi-Cal. It is therefore undisputed that the counties were not required to provide financially for the health needs of MIA's when [article XIII B](#) became effective. The state funded all such needs of MIA's.

In 1982, the Legislature passed Assembly Bill No. 799 (1981-1982 Reg. Sess.; Stats. 1982, ch. 328, pp. 1568-1609) (hereafter AB No. 799), which removed MIA's from the state-funded Medi-Cal program as of January 1, 1983, and thereby transferred to the counties, through the County Medical Services Plan which AB No. 799 created, the financial responsibility to provide health

services to approximately 270,000 MIA's. AB No. 799 required that the counties provide health care for MIA's, yet appropriated only 70 percent of what the state would have spent on MIA's had those persons remained a state responsibility under the Medi-Cal program.

Since 1983, the state has only partially defrayed the costs to the counties of providing health care to MIA's. Such state funding to counties was *349 initially relatively constant, generally more than \$400 million per year. By 1990, however, state funding had decreased to less than \$250 million. The state, however, has always included the full amount of its former obligation to provide for MIA's under the Medi-Cal program in the year preceding July 1, 1980, as part of its [article XIII B](#) “appropriations limit,” i.e., as part of the base amount of appropriations on which subsequent annual adjustments for cost-of-living and population changes would be calculated. About \$1 billion has been added to the state's adjusted spending limit for population growth and inflation *solely* because of the state's inclusion of all MIA expenditures in the appropriation limit established for its base year, 1979-1980. The state has not made proportional increases in the sums provided to counties to pay for the MIA services funded by the counties since January 1, 1983.

B. The function of [article XIII B](#).

Our recent decision in *County of Fresno v. State of California* (1991) 53 Cal.3d 482, 486-487 [280 Cal.Rptr. 92, 808 P.2d 235] (hereafter *County of Fresno*), explained the function of [article XIII B](#) and its relationship to [article XIII A](#), enacted one year earlier:

“At the June 6, 1978, Primary Election, [article XIII A](#) was added to the Constitution through the adoption of Proposition 13, an initiative measure aimed at controlling ad valorem property taxes and the imposition of new 'special taxes.' (*Amador Valley Joint Union High Sch. Dist. v. State Bd. of Equalization* (1978) 22 Cal.3d 208, 231-232 [149 Cal.Rptr. 239, 583 P.2d 1281].) The constitutional provision imposes a limit on the power of state and local governments to adopt and levy taxes. (*City of Sacramento v. State of California* (1990) 50 Cal.3d 51, 59, fn. 1 [266 Cal.Rptr. 139, 785 P.2d 522] (*City of Sacramento*)).

“At the November 6, 1979, Special Statewide Election, [article XIII B](#) was added to the Constitution through the adoption of Proposition 4, another initiative measure. That measure places limitations on the ability of both

state and local governments to appropriate funds for expenditures.

“Articles XIII A and XIII B work in tandem, together restricting California governments' power both to levy and to spend [taxes] for public purposes.’ (*City of Sacramento, supra*, 50 Cal.3d at p. 59, fn. 1.)

“Article XIII B of the Constitution was intended ... to provide 'permanent protection for taxpayers from excessive taxation' and 'a reasonable way to provide discipline in tax spending at state and local levels.’ (See *County of Placer v. Corin* (1980) 113 Cal.App.3d 443, 446 [170 Cal.Rptr. 232], quoting and following Ballot Pamp., Proposed Stats. and Amends. to Cal. Const. with arguments to voters, Special Statewide Elec. (Nov. 6, 1979), argument *350 in favor of Prop. 4, p. 18.) To this end, it establishes an 'appropriations limit' for both state and local governments (Cal. Const., art. XIII B, § 8, subd. (h)) and allows no 'appropriations subject to limitation' in excess thereof (*id.*, § 2).⁸ (See *County of Placer v. Corin, supra*, 113 Cal.App.3d at p. 446.) It defines the relevant 'appropriations subject to limitation' as 'any authorization to expend during a fiscal year the proceeds of taxes' (Cal. Const., art. XIII B, § 8, subd. (b).)” (*County of Fresno, supra*, 53 Cal.3d at p. 486.)

Under section 3 of article XIII B the state may transfer financial responsibility for a program to a county if the state and county mutually agree that the appropriation limit of the state will be decreased and that of the county increased by the same amount.⁹ Absent such an agreement, however, section 6 of article XIII B generally precludes the state from avoiding the spending limits it must observe by shifting to local governments programs and their attendant financial burdens which were a state responsibility prior to the effective date of article XIII B. It does so by requiring that “Whenever the Legislature or any state agency mandates a new program or higher level of service on any local government, the state shall provide a subvention of funds to reimburse such local government for the cost of such program or increased level of service”¹⁰

“Section 6 was included in article XIII B in recognition that article XIII A of the Constitution severely restricted the taxing powers of local governments. (See *County of Los Angeles v. State of California* (1987)] 43 Cal.3d 46,

61 [233 Cal.Rptr. 38, 729 P.2d 202].) The provision was intended to preclude the state from shifting financial responsibility for carrying out governmental functions onto local entities that were ill equipped to handle the task. (*Ibid.*; see *Lucia Mar Unified School Dist. v. Honig, supra*, 44 Cal.3d 830, 836, fn. 6.) Specifically, it was designed to protect the tax *351 revenues of local governments from state mandates that would require expenditure of such revenues.” (*County of Fresno, supra*, 53 Cal.3d at p. 487.)

C. Applicability of article XIII B to health care for MIA's.

The state argues that care of the indigent, including medical care, has long been a county responsibility. It claims that although the state undertook to fund this responsibility from 1979 through 1982, it was merely temporarily (as it turned out) helping the counties meet their responsibilities, and that the subsequent reduction in state funding did not impose any “new program” or “higher level of service” on the counties within the meaning of section 6 of article XIII B. Plaintiffs respond that the critical question is not the traditional roles of the county and state, but who had the fiscal responsibility on November 6, 1979, when article XIII B took effect. The purpose of article XIII B supports the plaintiffs' position.

As we have noted, article XIII A of the Constitution (Proposition 13) and article XIII B are complementary measures. The former radically reduced county revenues, which led the state to assume responsibility for programs previously financed by the counties. Article XIII B, enacted one year later, froze both state and county appropriations at the level of the 1978-1979 budgets—a year when the budgets included state financing for the prior county programs, but not county financing for these programs. Article XIII B further limited the state's authority to transfer obligations to the counties. Reading the two together, it seems clear that article XIII B was intended to limit the power of the Legislature to retransfer to the counties those obligations which the state had assumed in the wake of Proposition 13.

Under article XIII B, both state and county appropriations limits are set on the basis of a calculation that begins with the budgets in effect when article XIII B was enacted. If the state could transfer to the county a program for which the state at that time had full financial responsibility, the county could be forced to assume additional financial obligations without the right to appropriate additional moneys. The state, at the same

time, would get credit toward its appropriations limit for expenditures it did not pay. County taxpayers would be forced to accept new taxes or see the county forced to cut existing programs further; state taxpayers would discover that the state, by counting expenditures it did not pay, had acquired an actual revenue surplus while avoiding its obligation to refund revenues in excess of the appropriations limit. Such consequences are inconsistent with the purpose of [article XIII B](#).

Our decisions interpreting [article XIII B](#) demonstrate that the state's subvention requirement under [section 6](#) is not vitiated simply because the *352 "program" existed before the effective date of [article XIII B](#). The alternate phrase of [section 6 of article XIII B](#), "'higher level of service[.]" ... must be read in conjunction with the predecessor phrase 'new program' to give it meaning. Thus read, it is apparent that *the subvention requirement for increased or higher level of service is directed to state mandated increases in the services provided by local agencies in existing 'programs.'*" (*County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 56 [233 Cal.Rptr. 38, 729 P.2d 202], italics added.)

Lucia Mar Unified School Dist. v. Honig, supra, 44 Cal.3d 830, presents a close analogy to the present case. The state Department of Education operated schools for severely handicapped students, but prior to 1979 *school districts were required by statute to contribute to education of those students from the district at the state schools*. In 1979, in response to the restrictions on school district revenues imposed by Proposition 13, the statutes requiring such district contributions were repealed and the state assumed full responsibility for funding. The state funding responsibility continued until June 28, 1981, when [Education Code section 59300](#) (hereafter [section 59300](#)), requiring school districts to share in these costs, became effective.

The plaintiff districts filed a test claim before the commission, contending they were entitled to state reimbursement under [section 6 of article XIII B](#). The commission found the plaintiffs were not entitled to state reimbursement, on the rationale that the increase in costs to the districts compelled by [section 59300](#) imposed no new program or higher level of services. The trial and intermediate appellate courts affirmed on the ground that [section 59300](#) called for only an "'adjustment of costs'" of educating the severely handicapped, and that "*a shift*

in the funding of an existing program is not a new program or a higher level of service" within the meaning of [article XIII B](#). (*Lucia Mar Unified School Dist. v. Honig, supra*, 44 Cal.3d at p. 834, italics added.)

We reversed, rejecting the state's theories that the funding shift to the county of the subject program's costs does not constitute a new program. "[There can be no] doubt that although the schools for the handicapped have been operated by the state for many years, the program was new insofar as plaintiffs are concerned, since *at the time section 59300 became effective* they were not required to contribute to the education of students from their districts at such schools. [¶] ... To hold, under the circumstances of this case, that a shift in funding of an existing program from the state to a local entity is not a new program as to the local agency would, we think, violate the intent underlying [section 6 of article XIII B](#). That article imposed spending limits on state and local governments, and it followed by one year the adoption by initiative of [article XIII A](#), which severely limited the taxing *353 power of local governments. ... [¶] The intent of the section would plainly be violated if the state could, while retaining administrative control¹¹ of programs it has supported with state tax money, simply shift the cost of the programs to local government on the theory that the shift does not violate [section 6 of article XIII B](#) because the programs are not 'new.' Whether the shifting of costs is accomplished by compelling local governments to pay the cost of entirely new programs created by the state, *or by compelling them to accept financial responsibility in whole or in part for a program which was funded entirely by the state before the advent of article XIII B*, the result seems equally violative of the fundamental purpose underlying [section 6 of that article](#)." (*Lucia Mar Unified School Dist. v. Honig, supra*, 44 Cal.3d at pp. 835- 836, fn. omitted, italics added.)

The state seeks to distinguish *Lucia Mar* on the ground that the education of handicapped children in state schools had never been the responsibility of the local school district, but overlooks that the local district had previously been required to contribute to the cost. Indeed the similarities between *Lucia Mar* and the present case are striking. In *Lucia Mar*, prior to 1979 the state and county shared the cost of educating handicapped children in state schools; in the present case from 1971-1979 the state and county shared the cost of caring for MIA's under the Medi-Cal program. In 1979, following enactment of Proposition 13, the state took full responsibility for both

programs. Then in 1981 (for handicapped children) and 1982 (for MIA's), the state sought to shift some of the burden back to the counties. To distinguish these cases on the ground that care for MIA's is a county program but education of handicapped children a state program is to rely on arbitrary labels in place of financial realities.

The state presents a similar argument when it points to the following emphasized language from *Lucia Mar Unified School Dist. v. Honig, supra*, 44 Cal.3d 830: “[B]ecause section 59300 shifts partial financial responsibility for the support of students in the state-operated schools from the state to school districts—*an obligation the school districts did not have at the time article XIII B was adopted*—it calls for plaintiffs to support a ‘new program’ within the meaning of section 6.” (P. 836, fn. omitted, italics added.) It urges *Lucia Mar* reached its result *only* because the “program” requiring school district funding in that case *was not required by statute* at the effective date of ***354 article XIII B**. The state then argues that the case at bench is distinguishable because it contends Alameda County had a continuing obligation *required by statute* antedating that effective date, which had only been “temporarily”¹² suspended when **article XIII B** became effective. I fail to see the distinction between a case—*Lucia Mar*—in which no existing statute as of 1979 imposed an obligation on the local government and one—this case—in which the statute existing in 1979 imposed no obligation on local government.

The state's argument misses the salient point. As I have explained, the application of **section 6 of article XIII B** does not depend upon when the program was created, but upon who had the burden of funding it when **article XIII B** went into effect. Our conclusion in *Lucia Mar* that the educational program there in issue was a “new” program as to the school districts was not based on the presence or absence of any antecedent statutory obligation therefor. *Lucia Mar* determined that whether the program was new *as to the districts* depended on *when* they were compelled to assume the obligation to partially fund an existing program which they had not funded at the time **article XIII B** became effective.

The state further relies on two decisions, *Madera Community Hospital v. County of Madera* (1984) 155 Cal.App.3d 136 [201 Cal.Rptr. 768] and *Cooke v. Superior Court* (1989) 213 Cal.App.3d 401 [261 Cal.Rptr. 706],

which hold that the county has a statutory obligation to provide medical care for indigents, but that it need not provide precisely the same level of services as the state provided under Medi-Cal.¹³ Both are correct, but irrelevant to this case.¹⁴ The county's obligation to MIA's is defined by **Welfare and Institutions Code section 17000**, not by the former Medi-Cal program.¹⁵ If the ***355** state, in transferring an obligation to the counties, permits them to provide less services than the state provided, the state need only pay for the lower level of services. But it cannot escape its responsibility entirely, leaving the counties with a state-mandated obligation and no money to pay for it.

The state's arguments are also undercut by the fact that it continues to use the approximately \$1 billion in spending authority, generated by its previous total funding of the health care program in question, as a portion of its initial *base spending limit* calculated pursuant to **sections 1 and 3 of article XIII B**. In short, the state may maintain here that care for MIA's is a county obligation, but when it computes its appropriation limit it treats the entire cost of such care as a state program.

IV. Conclusion

This is a time when both state and county governments face great financial difficulties. The counties, however, labor under a disability not imposed on the state, for **article XIII A** of the Constitution severely restricts their ability to raise additional revenue. It is, therefore, particularly important to enforce the provisions of **article XIII B** which prevent the state from imposing additional obligations upon the counties without providing the means to comply with these obligations.

The present majority opinion disserves the public interest. It denies standing to enforce **article XIII B** both to those persons whom it was designed to protect—the citizens and taxpayers—and to those harmed by its violation—the medically indigent adults. And by its reliance on technical grounds to avoid coming to grips with the merits of plaintiffs' appeal, it permits the state to continue to violate **article XIII B** and postpones the day when the medically indigent will receive adequate health care.

Mosk, J., concurred. ***356**

Footnotes

- 1 The complaint also sought a declaration that the county was obliged to provide health care services to indigents that were equivalent to those available to nonindigents. This issue is not before us. The County of Alameda aligned itself with plaintiffs in the superior court and did not oppose plaintiffs' effort to enforce [section 6](#).
- 2 On November 23, 1987, the County of Los Angeles filed a test claim with the Commission. San Bernardino County joined as a test claimant. The Commission ruled against the counties, concluding that no state mandate had been created. The Los Angeles County Superior Court subsequently granted the counties' petition for writ of mandate ([Code Civ. Proc., § 1094.5](#)), reversing the Commission, on April 27, 1989. (No. C-731033.) An appeal from that judgment is presently pending in the Court of Appeal. (*County of Los Angeles v. State of California*, No. B049625.)
- 3 Plaintiffs argue that they seek only a declaration that AB 799 created a state mandate and an injunction against the shift of costs until the state decides what action to take. This is inconsistent with the prayer of their complaint which sought an injunction requiring defendants to restore Medi-Cal eligibility to all medically indigent adults until the state paid the cost of full health services for them. It is also unavailing.
- An injunction against enforcement of a state mandate is available only after the Legislature fails to include funding in a local government claims bill following a determination by the Commission that a state mandate exists. ([Gov. Code, § 17612](#).) Whether plaintiffs seek declaratory relief and/or an injunction, therefore, they are seeking to enforce [section 6](#). All further statutory references are to the Government Code unless otherwise indicated.
- 4 The test claim by the County of Los Angeles was filed prior to that proposed by Alameda County. The Alameda County claim was rejected for that reason. (See § 17521.) Los Angeles County permitted San Bernardino County to join in its claim which the Commission accepted as a test claim intended to resolve the issues the majority elects to address instead in this proceeding. Los Angeles County declined a request from Alameda County that it be included in the test claim because the two counties' systems of documentation were so similar that joining Alameda County would not be of any benefit. Alameda County and these plaintiffs were, of course, free to participate in the Commission hearing on the test claim. (§ 17555.)
- 5 " 'Local agency' means any city, county, special district, authority, or other political subdivision of the state." (§ 17518.)
- 6 " 'School district' means any school district, community college district, or county superintendant of schools." (§ 17519.)
- 7 Plaintiffs' argument that the Legislature's failure to make provision for individual enforcement of [section 6](#) before the Commission demonstrates an intent to permit legal actions, is not persuasive. The legislative statement of intent to relegate all mandate disputes to the Commission is clear. A more likely explanation of the failure to provide for test cases to be initiated by individuals lies in recognition that (1) because [section 6](#) creates rights only in governmental entities, individuals lack sufficient beneficial interest in either the receipt or expenditure of reimbursement funds to accord them standing; and (2) the number of local agencies having a direct interest in obtaining reimbursement is large enough to ensure that citizen interests will be adequately represented.
- 8 Plaintiffs are not without a remedy if the county fails to provide adequate health care, however. They may enforce the obligation imposed on the county by [Welfare and Institutions Code sections 17000 and 17001](#), and by judicial action. (See, e.g., *Mooney v. Pickett* (1971) 4 Cal.3d 669 [94 Cal.Rptr. 279, 483 P.2d 1231].)
- 9 For this reason, it would be inappropriate to address the merits of plaintiff's claim in this proceeding. (Cf. *Dix v. Superior Court* (1991) 53 Cal.3d 442 [279 Cal.Rptr. 834, 807 P.2d 1063].) Unlike the dissent, we do not assume that in representing the state in this proceeding, the Attorney General necessarily represented the interests and views of these officials.
- 1 The majority states that "Plaintiffs are not without a remedy if the county fails to provide adequate health care They may enforce the obligation imposed on the county by [Welfare and Institutions Code sections 17000 and 17001](#), and by judicial action." (Maj. opn., [ante](#), p. 336, fn. 8)
- The majority fails to note that plaintiffs have already tried this remedy, and met with the response that, owing to the state's inadequate subvention funds, the county cannot afford to provide adequate health care.
- 2 It is of no importance that plaintiffs did not request issuance of a writ of mandate. In *Taschner v. City Council* (1973) 31 Cal.App.3d 48, 56 [107 Cal.Rptr. 214] (overruled on other grounds in *Associated Home Builders etc., Inc. v. City of Livermore* (1976) 18 Cal.3d 582, 596 [135 Cal.Rptr. 41, 557 P.2d 473, 92 A.L.R.3d 1038]), the court said that "[a]s against a general demurrer, a complaint for declaratory relief may be treated as a petition for mandate [citations], and where a complaint for declaratory relief alleges facts sufficient to entitle plaintiff to mandate, it is error to sustain a general demurrer without leave to amend."
- In the present case, the trial court ruled on a motion for summary judgment, but based that ruling not on the evidentiary record (which supported plaintiffs' showing of irreparable injury) but on the issues as framed by the pleadings. This is

essentially equivalent to a ruling on demurrer, and a judgment denying standing could not be sustained on the narrow ground that plaintiffs asked for the wrong form of relief without giving them an opportunity to correct the defect. (See *Residents of Beverly Glen, Inc. v. City of Los Angeles* (1973) 34 Cal.App.3d 117, 127-128 [109 Cal.Rptr. 724].)

3 The majority's argument assumes that the state will comply with a judgment for plaintiffs by providing increased subvention funds. If the state were instead to comply by restoring Medi-Cal coverage for MIA's, or some other method of taking responsibility for their health needs, plaintiffs would benefit directly.

4 The majority emphasizes the statement of purpose of [Government Code section 17500](#): "The Legislature finds and declares that the existing system for reimbursing local agencies and school districts for the costs of state-mandated local programs has not provided for the effective determination of the state's responsibilities under [section 6 of article XIII B of the California Constitution](#). The Legislature finds and declares that the failure of the existing process to adequately and consistently resolve the complex legal questions involved in the determination of state-mandated costs has led to an increasing reliance by local agencies and school districts on the judiciary, and, therefore, in order to relieve unnecessary congestion of the judicial system, it is necessary to create a mechanism which is capable of rendering sound quasi-judicial decisions and providing an effective means of resolving disputes over the existence of state-mandated local programs." The "existing system" to which [Government Code section 17500](#) referred was the Property Tax Relief Act of 1972 ([Rev. & Tax. Code, §§ 2201-2327](#)), which authorized local agencies and school boards to request reimbursement from the state Controller. Apparently dissatisfied with this remedy, the agencies and boards were bypassing the Controller and bringing actions directly in the courts. (See, e.g., *County of Contra Costa v. State of California* (1986) 177 Cal.App.3d 62 [222 Cal.Rptr. 750].) The legislative declaration refers to this phenomena. It does not discuss suits by individuals.

5 "(a) The initial decision by a county to opt into the system pursuant to Section 77300 shall constitute a waiver of all claims for reimbursement for state-mandated local programs not theretofore approved by the State Board of Control, the Commission on State Mandates, or the courts to the extent the Governor, in his discretion, determines that waiver to be appropriate; provided, that a decision by a county to opt into the system pursuant to Section 77300 beginning with the second half of the 1988-89 fiscal year shall not constitute a waiver of a claim for reimbursement based on a statute chaptered on or before the date the act which added this chapter is chaptered, which is filed in acceptable form on or before the date the act which added this chapter is chaptered. A county may petition the Governor to exempt any such claim from this waiver requirement; and the Governor, in his discretion, may grant the exemption in whole or in part. The waiver shall not apply to or otherwise affect any claims accruing after initial notification. Renewal, renegotiation, or subsequent notification to continue in the program shall not constitute a waiver. [¶] (b) The initial decision by a county to opt into the system pursuant to Section 77300 shall constitute a waiver of any claim, cause of action, or action whenever filed, with respect to the Trial Court Funding Act of 1985, Chapter 1607 of the Statutes of 1985, or Chapter 1211 of the Statutes of 1987." ([Gov. Code, § 77203.5](#), italics added.)

"As used in this chapter, 'state-mandated local program' means any and all reimbursements owed or owing by operation of either [Section 6 of Article XIII B of the California Constitution](#), or [Section 17561 of the Government Code](#), or both." ([Gov. Code, § 77005](#), italics added.)

6 It is true that these officials would participate in a proceeding before the Commission on State Mandates, but they would do so as members of an administrative tribunal. On appellate review of a commission decision, its members, like the members of the Public Utilities Commission or the Workers' Compensation Appeals Board, are not respondents and do not appear to present their individual views and positions. For example, in *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830 [244 Cal.Rptr. 677, 750 P.2d 318], in which we reviewed a commission ruling relating to subvention payments for education of handicapped children, the named respondents were the state Superintendent of Public Instruction, the Department of Education, and the Commission on State Mandates. The individual members of the commission were not respondents and did not participate.

7 [Welfare and Institutions Code section 17000](#) provides that "[e]very county ... shall relieve and support all incompetent, poor, indigent persons, and those incapacitated by age, disease, or accident, lawfully resident therein, when such persons are not supported and relieved by their relatives or friends, by their own means, or by state hospitals or other state or private institutions."

8 [Article XIII B, section 1](#) provides: "The total annual appropriations subject to limitation of the state and of each local government shall not exceed the appropriations limit of such entity of government for the prior year adjusted for changes in the cost of living and population except as otherwise provided in this Article."

9 [Section 3 of article XIII B](#) reads in relevant part: "The appropriations limit for any fiscal year ... shall be adjusted as follows: "(a) In the event that the financial responsibility of providing services is transferred, in whole or in part ... from one entity of government to another, then for the year in which such transfer becomes effective the appropriation limit of the transferee

entity shall be increased by such reasonable amount as the said entities shall mutually agree and the appropriations limit of the transferor entity shall be decreased by the same amount. ...”

- 10 [Section 6 of article XIII B](#) further provides that the “Legislature may, but need not, provide such subvention of funds for the following mandates: (a) Legislative mandates requested by the local agency affected; (b) Legislation defining a new crime or changing an existing definition of a crime; or (c) Legislative mandates enacted prior to January 1, 1975, or executive orders or regulations initially implementing legislation enacted prior to January 1, 1975.” None of these exceptions apply in the present case.
- 11 The state notes that, in contrast to the program at issue in *Lucia Mar*, it has not retained administrative control over aid to MIA's. But the quoted language from *Lucia Mar*, while appropriate to the facts of that case, was not intended to establish a rule limiting [article XIII B, section 6](#), to instances in which the state retains administrative control over the program that it requires the counties to fund. The constitutional language admits of no such limitation, and its recognition would permit the Legislature to evade the constitutional requirement.
- 12 The state's repeated emphasis on the “temporary” nature of its funding is a form of post hoc reasoning. At the time [article XIII B](#) was enacted, the voters did not know which programs would be temporary and which permanent.
- 13 It must, however, provide a *comparable* level of services. (See [Board of Supervisors v. Superior Court \(1989\) 207 Cal.App.3d 552, 564 \[254 Cal.Rptr. 905\]](#).)
- 14 Certain language in [Madera Community Hospital v. County of Madera, supra, 155 Cal.App.3d 136](#), however, is questionable. That opinion states that the “Legislature intended that County bear an obligation to its poor and indigent residents, *to be satisfied from county funds*, notwithstanding federal or state programs which exist concurrently with County's obligation and alleviate, to a greater or lesser extent, County's burden.” (P. 151.) Welfare and Institutions Code section 17000 by its terms, however, requires the county to provide support to residents only “when such persons are not supported and relieved by their relatives or friends, by their own means, or by state hospitals or other state or private institutions.” Consequently, to the extent that the state or federal governments provide care for MIA's, the county's obligation to do so is reduced pro tanto.
- 15 The county's right to subvention funds under [article XIII B](#) arises because its duty to care for MIA's is a state- mandated responsibility; if the county had no duty, it would have no right to funds. No claim is made here that the funding of medical services for the indigent shifted to Alameda County is not a program “ 'mandated' ” by the state; i.e., that Alameda County has any option other than to pay these costs. ([Lucia Mar Unified School Dist. v. Honig, supra, 44 Cal.3d at pp. 836-837](#).)



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59 Cal.4th 59

Supreme Court of California

**LONG BEACH POLICE OFFICERS
ASSOCIATION**, Plaintiff and Appellant,

v.

CITY OF LONG BEACH et al.,

Defendants and Appellants;

Los Angeles Times Communications LLC,

Real Party in Interest and Respondent.

No. S200872.

|

May 29, 2014.

Synopsis

Background: City police officers association brought action against city, seeking an injunction against disclosure, pursuant to the California Public Records Act (CPRA), of names of officers involved in shooting incidents over a five-year period. Newspaper company intervened and filed opposition, and city filed memorandum aligning itself with association. The Superior Court, Los Angeles County, No. NC055491, [Patrick T. Madden](#), J., denied injunction without prejudice to future requests relating to individual officers. Association and city petitioned for writ of mandate, and the Court of Appeal affirmed. Association and city filed separate petitions for review, and the Supreme Court granted review, superseding the opinion of the Court of Appeal.

[Holding:] The Supreme Court, [Kennard](#), J., held that CPRA did not protect officers' names from disclosure.

Affirmed.

[Chin](#), J., dissented with opinion.

West Headnotes (6)

[1] Records

🔑 [Judicial enforcement in general](#)

Any failure to serve newspaper with police lieutenant's declaration did not adversely affect newspaper in Public Records Act action regarding disclosure of names of officers involved in shootings, as trial court concluded that the facts asserted in the declaration were too general and speculative to support the request for injunctive relief prohibiting disclosure. [West's Ann.Cal.Gov.Code § 6250](#).

[2 Cases that cite this headnote](#)

[2] Records

🔑 [Discretion and equitable considerations; balancing interests](#)

Records

🔑 [Evidence and burden of proof](#)

Public Records Act's "catchall exemption" allowing withholding of records if the public interest served by nondisclosure clearly outweighs the interest served by disclosure contemplates a case-by-case balancing process, with the burden of proof on the proponent of nondisclosure to demonstrate a clear overbalance on the side of confidentiality. [West's Ann.Cal.Gov.Code § 6255\(a\)](#).

[4 Cases that cite this headnote](#)

[3] Records

🔑 [Exemptions or prohibitions under other laws](#)

Public Records Act provision which protects records "exempted or prohibited pursuant to federal or state law" incorporates other disclosure prohibitions established by law. [West's Ann.Cal.Gov.Code § 6254\(k\)](#).

[3 Cases that cite this headnote](#)

[4] Records

🔑 [Personal privacy considerations in general; personnel matters](#)

California Public Records Act required disclosure of names of city police officers involved in shootings over five-year period; names themselves were not necessarily linked to information in personnel records, as they likely could be found in documents such as initial incident reports and could be provided without revealing any investigatory or disciplinary matter, public's substantial interest in the conduct of the officers involved in the shootings outweighed the officers' personal privacy interests, and there was no evidence of a specific safety concern regarding any particular officer which justified nondisclosure. [West's Ann.Cal.Gov.Code §§ 6254\(c\), 6255](#); [West's Ann.Cal.Penal Code § 832.7\(a\), 832.8\(d\)](#).

3 Cases that cite this headnote

[5] **Records**

🔑 [Personal privacy considerations in general; personnel matters](#)

When it comes to the Public Records Act disclosure of a peace officer's name, the public's substantial interest in the conduct of its peace officers outweighs, in most cases, the officer's personal privacy interest. [West's Ann.Cal.Gov.Code § 6254\(c\)](#).

3 Cases that cite this headnote

[6] **Records**

🔑 [Matters Subject to Disclosure; Exemptions](#)

A mere assertion of possible endangerment does not clearly outweigh the public interest in access to records. [West's Ann.Cal.Gov.Code § 6255\(a\)](#).

See 2 Witkin, Cal. Evidence (5th ed. 2012) Witnesses, § 312 et seq.

1 Cases that cite this headnote

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Opinion

[KENNARD, J.](#)*

*64 **461 A newspaper asked a city to release the names of police officers involved in certain **462 shootings while on duty. The police union then sought injunctive relief against the city in superior court, attempting to prevent release of the names. The newspaper intervened (seeking disclosure of the names), and the city then aligned itself with the union (opposing disclosure). The trial court denied the union's request for a permanent injunction; that denial was upheld on appeal. We granted the separate petitions for review filed by the city and the union. We now affirm the judgment of the Court of Appeal.

I

Shortly before 5:00 p.m., on December 12, 2010, two City of Long Beach police officers responded to a resident's telephone call about an intoxicated man brandishing a “six-shooter” on neighboring property. At the sight of the two officers, the man (35-year-old Douglas Zerby) pointed at them an object resembling a gun. The officers immediately fired multiple rounds at Zerby, killing him. It turned out that the object Zerby was holding was a garden hose spray nozzle with a pistol grip.

Three days later, reporter Richard Winton of the Los Angeles Times (the Times), asked the Long Beach City Attorney's Office for “[t]he names of Long Beach police officers involved in the December 12[, 2010,] office[r]-involved shooting in the 5300 block of East Ocean Boulevard” (the Zerby shooting), as well as “[t]he names of Long Beach police officers involved in officer [-]involved shootings from Jan[uary] 1[,] 2005 to Dec[ember] 11, 2010” (the nearly six-year period leading up to the Zerby shooting). The request was made under the California Public Records Act ([Gov.Code, § 6250 et seq.](#)).

On December 30, 2010, plaintiff Long Beach Police Officers Association (the Union), the bargaining agent for all Long Beach police officers, sought injunctive relief in the superior court. Named as defendants were the City of Long Beach, the Long Beach Police Department, and its chief of police (collectively, the City). In its complaint, the Union asserted that the City had informed it that, unless prohibited by a court, the City would disclose the information sought by the Times. Accompanying the Union's request for injunctive relief was a declaration by Lieutenant Steve James, the Union's president, expressing concern that release of the officers' names could result *65 in “threats against the well being of officers or their families,” as occurred in one recent police shooting case in which release of an officer's name led to “death threats” against ***59 the officer. James also mentioned an anonymous post on an Internet Web site, wishing that the children of an officer involved in a particular police shooting would experience Christmas without their father. James asserted that the Internet offers broad access to personal information, using only a person's name as an Internet search term.

The superior court issued a temporary restraining order prohibiting the City from disclosing to the Times the names of the officers involved in the Zerby shooting. The court then continued the case to a later date to determine whether to issue a preliminary or permanent injunction, and it allowed the Times to intervene in the action.

Defendant City supported plaintiff Union's request for injunctive relief. The City asserted that the names of the two officers involved in the December 2010 fatal shooting of Zerby were exempt from disclosure under the California Public Records Act. With respect to the names of the City's police officers involved in *earlier* shootings, the City asserted that those names, too, were likely subject to the same statutory exemptions but that its practice was to evaluate each disclosure request on a "case-by-case basis."

The City submitted a declaration by Long Beach Police Lieutenant Lloyd Cox, who was in charge of "the criminal and administrative investigations related to all Officer Involved Shootings." The declaration stated that the police department conducts an administrative investigation of every officer-involved shooting, and, if warranted, an internal criminal investigation follows. Documents resulting from these investigations are treated by the police department as personnel records that are statutorily exempt from disclosure. ****463** Cox's declaration also stated that revealing the name of an officer involved in a shooting could expose the officer and the officer's family to harassment, because the officer's home address and other personal information could easily be found using the Internet. The declaration further stated that when, for example, an officer is involved in a shooting of a gang member, it is not uncommon for the gang to retaliate against the officer. Cox mentioned eight "Officer Safety Bulletins ... about potential retaliation/threats against officers," two of which were related to shootings, and he also described graffiti in the City of Long Beach that read "Strike Kill a Cop."

In arguing against disclosure of the names of the officers involved in the Zerby shooting, the Union and the City cited [Government Code section 6255, subdivision \(a\)](#), which authorizes denial of a public records request when "the public interest served by not disclosing the record clearly outweighs the public interest served by disclosure of the record." The Union and the City ***66** argued that

the public interest in preventing harassment, threats, or violence against officers and their families outweighed any benefit the public would gain from disclosure.

[1] The Times moved to strike Lieutenant James's declaration (filed by the Union), but the Times did not object to the declaration of Lieutenant Cox (filed by the City).¹ The trial court struck those *****60** portions of the James declaration that mentioned (1) the general safety concerns associated with releasing the names of officers involved in shootings, (2) the death threats made against specific officers involved in past shootings, and (3) the ease with which a name can be used to gather personal information over the Internet. The trial court then denied the Union's request for a preliminary or permanent injunction, and it discharged the temporary restraining order. The court ruled that none of the disclosure exemptions in the California Public Records Act protected the names of officers involved in shootings. With respect to the potential harassment facing those officers and their families, the court considered such harassment to be speculative in the absence of a particularized showing regarding a specific officer. Recognizing that such a showing might be made in the future, the superior court denied injunctive relief "without prejudice" to a renewed request demonstrating that "releasing the names of particular officers will create a likelihood of harm."

The Union and the City appealed, without success. We then granted their petitions for review.²

II

A. Statutory Law

The California Legislature in 1968, recognizing that "access to information concerning the conduct of the people's business is a fundamental and ***67** necessary right of every person in this state" ([Gov.Code, § 6250](#)), enacted the California Public Records Act, which grants access to public records held by state and local agencies (*id.*, § 6253, subd. (a)). The act broadly defines "[p]ublic records" as including "any writing containing information relating to the conduct of the public's business prepared, owned, used, or retained by any state or local agency..." (*Id.*, § 6252, subd. (e).) The act has certain ****464** specific exemptions (*id.*, §§ 6254–6254.30), but a public entity claiming an exemption must show that the

requested information falls within the exemption (*id.*, § 6255, subd. (a)).

[2] Government Code section 6255's subdivision (a) contains a "catchall exemption." (*Michaelis, Montanari & Johnson v. Superior Court* (2006) 38 Cal.4th 1065, 1071, 44 Cal.Rptr.3d 663, 136 P.3d 194.) It allows a public agency to "justify withholding any record by demonstrating that ... on the facts of the particular case the public interest served by not disclosing the record clearly outweighs the public interest served by disclosure of the record." (Gov.Code, § 6255, subd. (a).) As we have said in the past, "this provision contemplates a case-by-case balancing process, with the burden of proof on the proponent of nondisclosure to demonstrate a clear overbalance on the side of confidentiality." (*Michaelis, Montanari & Johnson, supra*, at p. 1071, 44 Cal.Rptr.3d 663, 136 P.3d 194.)

[3] Also relevant here is Government Code section 6254, subdivision (c), which ***61 protects "[p]ersonnel, medical, or similar files, the disclosure of which would constitute an unwarranted invasion of personal privacy." But the Union and the City place their greatest reliance on Government Code section 6254, subdivision (k). That provision protects "[r]ecords, the disclosure of which is exempted or prohibited pursuant to federal or state law, including, but not limited to, provisions of the Evidence Code relating to privilege." Succinctly put, subdivision (k) "incorporates other [disclosure] prohibitions established by law." (*Copley Press, Inc. v. Superior Court* (2006) 39 Cal.4th 1272, 1283, 48 Cal.Rptr.3d 183, 141 P.3d 288 (*Copley*), quoting *CBS, Inc. v. Block* (1986) 42 Cal.3d 646, 656, 230 Cal.Rptr. 362, 725 P.2d 470.) The "prohibitions" pertinent here are those set forth in a set of discovery statutes that the Legislature enacted in 1978 in response to our 1974 decision in *Pitchess v. Superior Court* (1974) 11 Cal.3d 531, 113 Cal.Rptr. 897, 522 P.2d 305 (*Pitchess*).

In *Pitchess*, a defendant charged with battery on four sheriff's deputies (Pen.Code, §§ 242, 243, subd. (b)) claimed he was defending himself against the deputies' use of excessive force. We held that defendants in similar situations had a right, albeit limited, to discover from a peace officer's employer the existence of any previous complaints about the officer's use of excessive force. (*Pitchess, supra*, 11 Cal.3d at pp. 537–538, 113 Cal.Rptr. 897, 522 P.2d 305.) In response to our *68 decision, the Legislature enacted several statutes, which we hereafter

refer to as the "*Pitchess* statutes" and which we summarize below.

Under the *Pitchess* statutes, a public entity that employs peace officers must investigate and retain citizen complaints of any officer misconduct, such as the use of excessive force. (Pen.Code, § 832.5.) Litigants, upon a showing of good cause, are given limited access to records of such complaints and investigations (Evid.Code, §§ 1043, 1045), but such records are otherwise "confidential" and may "not be disclosed" (Pen.Code, §§ 832.7, subd. (a), 832.8, subd. (e)). Also protected as "confidential" are "[p]eace officer ... personnel records" and "information obtained from these records." (*Id.*, § 832.7, subd. (a).) Such "personnel records" include an officer's personal and family information, medical history, election of benefits (*id.*, § 832.8, subds. (a), (b) & (c)), as well as matters related to the officer's "advancement, appraisal, or discipline" (*id.*, subd. (d)). In addition, confidentiality applies to any information that "would constitute an unwarranted invasion of [a peace officer's] personal privacy." (*Id.*, § 832.8, subd. (f).)

One other piece of legislation merits mention here. In 2004, California's voters passed an initiative measure that added to the state Constitution a provision directing the courts to broadly construe statutes that grant public access to government information and to narrowly construe statutes that limit such access. (Cal. Const., art. I, § 3, subd. (b)(2).) That provision, however, does not affect the construction of any statute "to the extent ... it protects [the] right to privacy, including any statutory procedures governing discovery or disclosure of information concerning the official performance or professional qualifications of a peace officer." (**465 Cal. Const., art. I, § 3, subd. (b)(3).) Thus, by its express terms, the constitutional provision excludes from the requirement of narrow construction those statutes that protect the privacy interests of peace officers, including Government Code section 6254's subdivision (c) and the *Pitchess* statutes, both of which are at issue here.

B. Decisional Law

Relevant here are two of this court's recent decisions, which considered the interplay ***62 between the *Pitchess* statutes and requests under the California Public Records Act for disclosure of peace officers' names.

In *Copley, supra*, 39 Cal.4th 1272, 48 Cal.Rptr.3d 183, 141 P.3d 288 (decided in 2006), a newspaper publisher sought access to a civil service commission's records of an administrative appeal brought by a county sheriff's deputy who had been terminated for disciplinary reasons. After the commission denied the request, the publisher unsuccessfully petitioned the superior court for a writ of mandate, seeking to compel disclosure. The publisher then appealed, and the Court of Appeal *69 directed the civil service commission to give the publisher access to the records, and also to disclose the deputy's name. The Court of Appeal reasoned that because the *Pitchess* statutes define "personnel records" as any file maintained under the officer's name *by the officer's employing agency* (Pen.Code, § 832.8) and because the civil service commission was not the officer's employing agency, the civil service commission's records did not qualify as "personnel records" protected by the *Pitchess* statutes. At the request of two police unions that had intervened in the action, we granted review and, with one justice dissenting, reversed the Court of Appeal.

Copley held that the civil service commission's records of the deputy's appeal were confidential "personnel records" under the *Pitchess* statutes (Pen.Code, §§ 832.7, 832.8) and therefore exempt from disclosure. (*Copley, supra*, 39 Cal.4th at pp. 1286–1296, 48 Cal.Rptr.3d 183, 141 P.3d 288.) *Copley* explained that neither the language nor the legislative history of the *Pitchess* statutes suggested that a peace officer's privacy rights should have less protection simply because the officer's employer uses an outside agency like the civil service commission to conduct its administrative appeals. (*Copley, at p. 1295*, 48 Cal.Rptr.3d 183, 141 P.3d 288.) *Copley* also rejected the Court of Appeal's conclusion that *the name* of the officer who brought the appeal had to be disclosed, noting that the *Pitchess* statutes were "designed to protect, among other things, 'the identity of officers' subject to [citizen] complaints.'" (*Copley, at p. 1297*, 48 Cal.Rptr.3d 183, 141 P.3d 288, quoting Pen.Code, § 832.7, subd. (a); see *Copley, at p. 1297*, 48 Cal.Rptr.3d 183, 141 P.3d 288, quoting Pen.Code, § 832.7, subd. (c).)

Copley then discussed the Court of Appeal's reliance on an earlier appellate decision, *New York Times Co. v. Superior Court* (1997) 52 Cal.App.4th 97, 60 Cal.Rptr.2d 410 (*New York Times*), which broadly declared that the *Pitchess* statutes do not prevent disclosure of *the names* of peace officers. (*Copley, supra*, 39 Cal.4th at pp. 1297–

1298, 48 Cal.Rptr.3d 183, 141 P.3d 288.) That categorical statement was made, we said, "[w]ithout any analysis," and was "simply incorrect, at least insofar as it applies to disciplinary matters like the one at issue [in *Copley*]." (*Id. at p. 1298*, 48 Cal.Rptr.3d 183, 141 P.3d 288.) We disapproved *New York Times* to the extent that decision conflicted with our analysis in *Copley*. (*Copley, at p. 1298*, 48 Cal.Rptr.3d 183, 141 P.3d 288.)

In 2007, just one year after *Copley, supra*, 39 Cal.4th 1272, 48 Cal.Rptr.3d 183, 141 P.3d 288, we again addressed the issue of a newspaper's request, made under the California Public Records Act, for disclosure of the names of certain peace officers. In *Commission on Peace Officer Standards and Training v. Superior Court* (2007) 42 Cal.4th 278, 64 Cal.Rptr.3d 661, 165 P.3d 462 (*Commission on Peace Officer Standards*), a newspaper sought certain information about peace officers hired statewide by various California public entities during a specified 10–year period. ***63 The information was contained in a database maintained by a public agency. When the agency denied the newspaper's request, the *70 newspaper challenged that decision in superior court, which ordered disclosure **466 of each officer's name, the appointing agency, the date of new appointment, and, if applicable, the date of termination. The Court of Appeal reversed, but a majority of this court disagreed with the Court of Appeal. (*Id. at p. 303*, 64 Cal.Rptr.3d 661, 165 P.3d 462.)

In *Commission on Peace Officer Standards*, the public agency that had compiled the peace officer database did not employ any of the peace officers, and therefore the entries in its database were not "personnel records" under a literal reading of the *Pitchess* statutes (Pen.Code, § 832.8 [limiting personnel records to records held in files maintained by an individual's employer]). Nonetheless, a majority of this court concluded that the information in the database would fall within the protections afforded personnel records if the information was "obtained from" personnel records maintained by the employing agencies of the peace officers in question. (*Commission on Peace Officer Standards, supra*, 42 Cal.4th at p. 289, 64 Cal.Rptr.3d 661, 165 P.3d 462.) The majority further concluded, however, "that peace officer personnel records include only the types of information enumerated in [Penal Code] section 832.8" (*id. at p. 293*, 64 Cal.Rptr.3d 661, 165 P.3d 462), and because the specific information the trial court ordered disclosed (the names of the officers,

their employing agencies, and their employment dates) did not fall into any of the enumerated categories, it was not information obtained from protected personnel records (*id.* at pp. 294–299, 64 Cal.Rptr.3d 661, 165 P.3d 462), and therefore it was subject to disclosure.

Commission on Peace Officer Standards next held that [Government Code section 6254](#)'s subdivision (c), which is part of the California Public Records Act, also did not preclude disclosure of the information covered by the superior court's order. (See *Commission on Peace Officer Standards, supra*, 42 Cal.4th at p. 303, 64 Cal.Rptr.3d 661, 165 P.3d 462.) As noted (see 172 Cal.Rptr.3d at p. 60, 325 P.3d at p. 464, *ante*), that statutory provision authorizes denial of a public records request when the information sought consists of “[p]ersonnel, medical, or similar files, the disclosure of which would constitute an unwarranted invasion of personal privacy.” ([Gov.Code, § 6254, subd. \(c\)](#).) *Commission on Peace Officer Standards* assumed for purposes of its analysis that the records at issue “may be characterized as ‘[p]ersonnel ... or similar files.’ ” (*Commission on Peace Officer Standards, at p. 299, 64 Cal.Rptr.3d 661, 165 P.3d 462.*) But it noted that the exemption set forth in [section 6254](#)'s subdivision (c) requires a balancing of “the privacy interests of peace officers in the information at issue against the public interest in disclosure,” and it further noted that the party opposing disclosure “has the burden” of showing that the records at issue fall within the exemption—a showing the agency failed to make in *Commission on Peace Officer Standards*. (*Commission on Peace Officer Standards, at p. 299, 64 Cal.Rptr.3d 661, 165 P.3d 462.*)

Against this background of relevant statutes and court decisions, we now consider the disclosure request of the Times.

*71 III

[4] The Times, citing the California Public Records Act, seeks disclosure of the names of the two Long Beach police officers involved in the December 12, 2010, fatal shooting of Zerby, as well as the ***64 names of any Long Beach officers involved in shootings occurring between January 1, 2005, and December 11, 2010. The Union and the City oppose disclosure. They rely largely on the confidentiality protections afforded peace officers under the *Pitchess* statutes, focusing in particular on [Penal Code section](#)

[832.7](#)'s subdivision (a) (protecting from disclosure a peace officer's “personnel records”) and [Penal Code section 832.8](#)'s subdivision (d) (defining “personnel records” as including records of employee “appraisal[] or discipline”).

The Union and the City also attach significance to the italicized language in this quote from *Commission on Peace Officer Standards*: “[T]he legislative concern [in adopting [sections 832.7](#) and [832.8](#)] appears to have been with *linking a named officer to the private or sensitive information listed in [section 832.8](#)*. ... It seems unlikely that the Legislature contemplated that the identification of an individual as a peace officer, *unconnected **467 to any of the information it defined as part of a personnel record*, would be rendered confidential by [section 832.8](#).” (*Commission on Peace Officer Standards, supra*, 42 Cal.4th at p. 295, 64 Cal.Rptr.3d 661, 165 P.3d 462, italics added.) The Union and the City contend that disclosing the names of officers involved in on-duty shootings necessarily *links* the named officers to private or sensitive information in their personnel files, information made confidential under [Penal Code section 832.7](#)'s subdivision (a). The Union and the City reason that because every on-duty shooting is routinely investigated by the employing agency, the details of every such incident (including the names of the officers involved) are “records relating to” officer “appraisal[] or discipline” ([Pen.Code, § 832.8, subd. \(d\)](#)), which, by definition, are confidential “personnel records” (*id.*, [§ 832.8](#)). We are not persuaded.

Although the *Pitchess* statutes limit public access to personnel records ([Pen.Code, § 832.7, subd. \(a\)](#)), including officer names if they are *linked* to information in personnel records (*Commission on Peace Officer Standards, supra*, 42 Cal.4th at p. 295, 64 Cal.Rptr.3d 661, 165 P.3d 462), many records routinely maintained by law enforcement agencies are not personnel records. For example, the information contained in the initial incident reports of an on-duty shooting are typically not “personnel records” as that term is defined in [Penal Code section 832.8](#). It may be true that such shootings are routinely investigated by the employing agency, resulting eventually in some sort of officer appraisal or discipline. But only the records *generated* in connection with that appraisal or discipline would come within the statutory definition of personnel records ([Pen.Code, § 832.8, subd. \(d\)](#)). We do not read the phrase “records relating to ... [¶] ... *72 [¶] ... [e]mployee ... appraisal[] or discipline” (*ibid.*) so broadly as to include every record that might be *considered* for

purposes of an officer's appraisal or discipline, for such a broad reading of the statute would sweep virtually all law enforcement records into the protected category of "personnel records" (*id.*, § 832.8).

Government Code section 6254's subdivision (f) lends some support to our conclusion. Under that statute, when a shooting by a peace officer occurs during an arrest (Gov.Code, § 6254, subd. (f)(1)) or in the course of responding to a complaint or request for assistance (*id.*, § 6254, subd. (f)(2)), and when the officer's name is recorded as one of the "factual circumstances" of the incident, disclosure of the officer's name is generally required. It thus appears that the Legislature draws a distinction between (1) records of factual information about an incident (which generally must be disclosed) and (2) records generated as part of an internal investigation ***65 of an officer in connection with the incident (which generally are confidential). We therefore agree with this point made in a 2008 opinion by the California Attorney General: "Generally speaking, a response to a request just for the names of officers involved in a particular incident may be provided without revealing any investigatory or disciplinary matter that may have arisen out of the incident. Disclosure would merely communicate a statement of fact that the named officers were involved in the incident. It would not imply any judgment that the actions taken were inappropriate or even suspect." (91 Ops.Cal.Atty.Gen. 11, 16–17 (2008), fn. omitted.) An employing agency is, of course, free to emphasize, when complying with a California Public Records Act request, that its disclosure of the names of officers involved in an incident does not imply any wrongdoing by those officers.

Significantly, the *Pitchess* statutes are silent as to whether the names of officers involved in shootings are protected "personnel records." (Pen.Code, § 832.8.) That silence is important because, as this court observed in *Commission on Peace Officer Standards*, the personnel records exemption is limited to the categories of information that are expressly "enumerated" in Penal Code section 832.8. (*Commission on Peace Officer Standards, supra*, 42 Cal.4th at p. 293, 64 Cal.Rptr.3d 661, 165 P.3d 462.) That the Legislature did not intend to protect peace officers' identities can also be inferred from the Legislature's enactment of Penal Code section 830.10, which requires uniformed officers to display their name or identification **468 number. That statute reflects a legislative policy

that, generally, the public has a right to know the identity of an officer involved in an on-duty shooting.

Misplaced is the reliance by the Union and the City on this court's decision in *Copley, supra*, 39 Cal.4th 1272, 48 Cal.Rptr.3d 183, 141 P.3d 288. There, as we noted earlier, a newspaper publisher sought records of an administrative appeal brought by a sheriff's *73 deputy who had been terminated. This court concluded that the records (including the deputy's name) were confidential personnel records under the *Pitchess* statutes. (*Copley, at pp. 1297–1298*, 48 Cal.Rptr.3d 183, 141 P.3d 288.) Later, in *Commission on Peace Officer Standards*, this court emphasized that the records requested in *Copley* would have "linked" the deputy's name to "private or sensitive" personnel matters, thus explaining why the name at issue in *Copley* was protected. (*Commission on Peace Officer Standards, supra*, 42 Cal.4th at p. 295, 64 Cal.Rptr.3d 661, 165 P.3d 462; see *id.* at pp. 298–299, 64 Cal.Rptr.3d 661, 165 P.3d 462.) Here, by contrast, disclosing the names of officers involved in various shootings would not imply that those shootings resulted in disciplinary action against the officers, and it would not link those names to any confidential personnel matters or other protected information.

In arguing here against disclosure of the officers' names, the Union and the City note this court's disapproval in *Copley, supra*, 39 Cal.4th at page 1298, 48 Cal.Rptr.3d 183, 141 P.3d 288, of the Court of Appeal's statement in *New York Times, supra*, 52 Cal.App.4th at page 101, 60 Cal.Rptr.2d 410, that "'an individual's name is not exempt from disclosure'" under the *Pitchess* statutes. But, as we explained in *Commission on Peace Officer Standards, supra*, 42 Cal.4th at page 298, 64 Cal.Rptr.3d 661, 165 P.3d 462, this court disapproved the statement from *New York Times* only "'insofar as it applie[d] to disciplinary matters like the one at issue'" in *Copley*. (See *Copley, at p. 1298*, 48 Cal.Rptr.3d 183, 141 P.3d 288.) The records sought in *Copley* linked the officer's name, not just to an on-duty shooting, but to a ***66 confidential disciplinary action involving the officer, and therefore they were exempt from disclosure. (See *Commission on Peace Officer Standards, supra*, 42 Cal.4th at pp. 295, 298–299, 64 Cal.Rptr.3d 661, 165 P.3d 462.) Thus, *Copley's* disapproval of the statement from *New York Times* did not alter the latter case's core holding, generally permitting disclosure of the names of peace officers involved in on-duty shootings.

(See 91 Ops.Cal.Atty.Gen. 11, 13–15 (2008) [discussing Copley's effect on *New York Times*].)

[5] Nor does [Government Code section 6254's](#) subdivision (c), which is part of the California Public Records Act, help the Union and the City in their effort to prevent disclosure of the names of officers involved in shootings. As noted (see 172 Cal.Rptr.3d at p. 60, 325 P.3d at p. 464, *ante*), that provision exempts from disclosure “[p]ersonnel ... or similar files” if disclosure “would constitute an unwarranted invasion of personal privacy.” ([Gov.Code, § 6254, subd. \(c\)](#).) A serious question arises as to whether the names of peace officers involved in particular law enforcement incidents can be characterized as “[p]ersonnel ... or similar files” (*ibid.*). Moreover, when it comes to the disclosure of a peace officer's name, the public's substantial interest in the conduct of its peace officers outweighs, in most cases, the officer's personal privacy interest. As we noted in *Commission on Peace Officer Standards*: “Peace officers ‘hold one of the most powerful positions in our society; our dependence on them is high and the potential for abuse of power is far from insignificant.’” [*74 City of Hemet v. Superior Court \(1995\) 37 Cal.App.4th 1411, 1428 \[44 Cal.Rptr.2d 532\]](#).) A police officer ‘possesses both the authority and the ability to exercise force. Misuse of [this] authority can result in significant deprivation of constitutional rights and personal freedoms, not to mention bodily injury and financial loss.’ ([Gray v. Udevitz \(10th Cir.1981\) 656 F.2d 588, 591](#).)” (*Commission on Peace Officer Standards, supra*, 42 Cal.4th at pp. 299–300, 64 Cal.Rptr.3d 661, 165 P.3d 462.) Thus, the public's significant interest in the conduct of its peace officers “diminishes and counterbalances” an officer's privacy interest in keeping his or her name confidential. (*Id.* at p. 299, 64 Cal.Rptr.3d 661, 165 P.3d 462.)

****469** In a case such as this one, which concerns officer-involved shootings, the public's interest in the conduct of its peace officers is particularly great because such shootings often lead to severe injury or death. Here, therefore, in weighing the competing interests, the balance tips strongly in favor of identity disclosure and against the personal privacy interests of the officers involved. Of course, if it is essential to protect an officer's anonymity for safety reasons or for reasons peculiar to the officer's duties—as, for example, in the case of an undercover officer—then the public interest in disclosure of the officer's name may need to give way. (See [International Federation](#)

[of Professional and Technical Engineers, Local 21, AFL–CIO v. Superior Court \(2007\) 42 Cal.4th 319, 337, 64 Cal.Rptr.3d 693, 165 P.3d 488](#).) That determination, however, would need to be based on a particularized showing, which was not made here.

We next consider the City's assertion that [Government Code section 6254's](#) subdivision (f) permits it to withhold the names of officers involved in on-duty shootings. That provision exempts from disclosure “[r]ecords ... of investigations conducted by ... any state or local police agency.” (*Ibid.*) The Times here is not seeking the records of any administrative or criminal investigation, so that exemption is inapplicable.

*****67 [6]** Finally, we consider the catchall exemption in [Government Code section 6255's](#) subdivision (a), which allows a public agency to withhold any public record if the agency shows that “on the facts of the particular case the public interest served by not disclosing the record clearly outweighs the public interest served by disclosure of the record.” The catchall exemption sets forth a balancing test, and we have already concluded that, generally, the balance of interests favors disclosing the names of peace officers involved in on-duty shootings. (See 172 Cal.Rptr.3d at pp. 65–66, 325 P.3d at pp. 467–468, *ante*.) Vague safety concerns that apply to all officers involved in shootings are insufficient to tip the balance against disclosure of officer names. As we have said in the past, “[a] mere assertion of possible endangerment does not ‘clearly outweigh’ the public interest in access to ... records.” ([CBS, Inc. v. Block, supra](#), 42 Cal.3d at p. 652, 230 Cal.Rptr. 362, 725 P.2d 470.)

The Union and the City assert that disclosing the names of peace officers involved in shootings could lead to harassment of those officers and their ***75** families. In rejecting that argument, the trial court found that the Union and the City had offered “no evidence” of a “specific safety concern regarding any particular officer.” We agree. The declaration by Long Beach Police Lieutenant Cox (submitted by the City) described the possibility of gang retaliation against officers involved in shooting gang members, but those concerns were general in nature. The December 2010 Zerby shooting did not involve a gang member, and the Union and the City did not identify other shootings that did involve a gang member. The Cox declaration also mentioned two safety bulletins warning of “potential retaliation/threats” against

officers involved in shootings, and it described graffiti that read “Strike Kill a Cop,” but those vague concerns do not establish any specific danger to the officers involved in the Zerby shooting or any shooting that occurred in the six years before the Zerby shooting (see the Times's public records request, quoted at 172 Cal.Rptr.3d at p. 58, 325 P.3d at p. 462, *ante*).

We do not hold that the names of officers involved in shootings have to be disclosed in every case, regardless of the circumstances. We merely conclude, as did the trial court and the Court of Appeal, that the particularized showing necessary to outweigh the public's interest in disclosure was not made *here*, where the Union and the City relied on only a few vaguely worded declarations making only general assertions about the risks officers face after a shooting. The public records request by the Times is broadly worded and covers a wide variety of incidents. Thus, the Union and the City sought a blanket rule preventing the disclosure of officer names *every time* an officer is involved in a shooting. Such a rule would even prevent disclosure of the name of an officer who acted in a heroic manner that was unlikely to provoke retaliation of any kind, in which case officer ****470** safety would not be an issue. We reject that blanket rule.

The trial court's denial of injunctive relief was without prejudice to any later evidentiary showing that disclosing a particular officer's name would compromise that officer's safety or the safety of the officer's family. That ruling permits further litigation by the Union, and it reflects the trial court's recognition, which we share, that the public's interest in access to public records is not absolute and must be weighed against the countervailing privacy and safety interests of peace officers. Understandable are the general safety concerns of officers who fear retaliation from angry members of the community *****68** after an officer-involved shooting, especially when the shooting results in the death of an unarmed person. But the Legislature, whose laws we must construe, has not gone so far as to protect the names of all officers involved in such shootings. That the Legislature generally considers it important for the public to know the identities of the officers serving the community is reflected in the statutory provision requiring a uniformed officer to display either a name or an identification number ([Pen.Code, § 830.10](#)).

*76 DISPOSITION

We affirm the judgment of the Court of Appeal, which upheld the trial court's denial of the Union's requested injunctive relief.

WE CONCUR: [CANTIL-SAKAUYE, C.J.](#), [BAXTER, WERDEGAR](#), [CORRIGAN](#), [LIU, JJ.](#)

Dissenting Opinion by [CHIN, J.](#)

I disagree with the majority's conclusion that the City of Long Beach (the City) and the Long Beach Police Officers Association (the Union) have failed to show that the information the Los Angeles Times (the Times) has requested—the names of the officers “involved in” the December 12, 2010, shooting of Douglas Zerby and the names of all police officers “involved in” shootings from January 1, 2005, until December 11, 2010—is exempt from disclosure under the California Public Records Act (CPRA) ([Gov.Code, § 6250 et seq.](#)).¹ In my view, the evidence in the record of the safety threat faced by police officers identified as having been involved in a shooting establishes that the requested information is exempt from disclosure under [section 6254, subdivision \(c\)](#), which provides that the CPRA does not require disclosure of “[p]ersonnel, medical, or similar files, the disclosure of which would constitute an unwarranted invasion of personal privacy.” I therefore dissent.

In relying on this section, the Union acknowledges that the majority in [Commission on Peace Officer Standards and Training v. Superior Court \(2007\) 42 Cal.4th 278, 64 Cal.Rptr.3d 661, 165 P.3d 462](#) ([Commission on Peace Officer Standards](#)) held that “the privacy and safety interests of peace officers” as a group regarding the mere fact of their employment “do not outweigh the public's interest in the disclosure of [that] information.” ([Commission on Peace Officer Standards, supra, 42 Cal.4th at p. 303, 64 Cal.Rptr.3d 661, 165 P.3d 462.](#)) The Union argues, however, that the “heightened safety concerns of officers who have been involved in shootings” warrant striking a different “balance” with regard to this “subgroup.” In support of its argument, the Union relies on the declaration of Long Beach Police Lieutenant Lloyd Cox (Cox declaration), which states in relevant part: (1) “A number of officer involved shootings

involve gang members or violent criminals”; (2) “When an officer is involved in a shooting with a gang member, it is not uncommon for the gang to retaliate against law enforcement officers”; (3) “Since late 2007, the Long Beach Police Department has issued eight Officer Safety Bulletins to the department about potential retaliation/threats against officers, two of which were directly related to shootings involving police officers. As recently as January 10, 2011, the department was notified of graffiti at 5100 Appian Way *77 that was approximately 4 feet high and 6 inches long which read ‘Strike Kill a Cop’”; and (4) “Today, in the age of the internet, knowing an individual's name can be the gateway to a world of information. Public documents ***69 are readily **471 accessible on line and can provide anyone with the home address of an individual, including a police officer. The address of a police officer in the hands of a gang member, violent offender, or angry friend, relative, or associate of a person who was shot by a police officer is of great concern for the personal safety of both the officer and their [sic] family. Therefore the Long Beach Police Department insists on protecting the identity of its officers, when those officers are involved in critical incidents, including shootings, in order to ensure their safety and the safety of their families.”

I agree with the Union's argument. As I explained in *Commission on Peace Officer Standards*, “in 1990, the Legislature amended subdivision (a) of [Penal Code] section 832.8 by adding [officers'] ‘home addresses’ to the list of examples of confidential [p]ersonal data.’ (Stats.1990, ch. 264, § 1, p. 1535.) According to the amendment's legislative history, one of the Legislature's purposes in adding ‘home addresses’ to the list was to protect officers and their families. (Assem. Com. on Public Safety, Analysis of Sen. Bill 1985 (1989–1990 Reg. Sess.) as amended May, 16, 1990, p. 2.) Given that publicly available databases on the Internet make it easy to link a name to an address, the release of an officer's name would not seem to pose much, if any, less of a safety risk than would disclosing an officer's home address. (See *Frank v. City of Akron* (6th Cir.2002) 290 F.3d 813, 819 [‘Most individuals' addresses ... are readily available on the Internet’].) ... [I]n light of the accessibility of information through the Internet, it would be entirely ‘feasible’ for someone hostile toward the police to use the list of names to locate peace officers' addresses in order to ‘harass them’ or their families. [Citation.] Moreover, in light of the Legislature's acknowledgment of the dangers faced by

officers and their families, ... we [cannot] simply dismiss this threat as being ‘purely speculative.’ (See *King County v. Sheehan* [(2002) 114 Wash.App. 325, 340, 57 P.3d 307] [it is ‘naïve ... to believe that police officers who are identified on anti-police web sites ... by name and home address ... could not thereby be placed in danger or subjected to harassment’].)” (*Commission on Peace Officer Standards, supra*, 42 Cal.4th at p. 317, 64 Cal.Rptr.3d 661, 165 P.3d 462 (dis. opn. of Chin, J.)) The evidence in the record here amply supports this analysis.

Nothing in the majority's brief discussion of section 6254, subdivision (c), convinces me otherwise. The majority first asserts that there is a “serious question” as “to whether the names of peace officers involved in particular law enforcement incidents can be characterized as [p]ersonnel ... or similar files’ ” within the meaning of section 6254, subdivision (c). (Maj. opn., ante, 172 Cal.Rptr.3d at p. 65, 325 P.3d at p. 467.) However, for reasons I have explained in a previous case, I have no trouble concluding that the names of officers who have been involved in a *78 shooting constitute “personnel ... or similar files” under section 6254, subdivision (c). (See *International Federation of Professional and Technical Engineers, Local 21, AFL–CIO v. Superior Court* (2007) 42 Cal.4th 319, 350–351, 64 Cal.Rptr.3d 693, 165 P.3d 488 (conc. & dis. opn. of Chin, J.) (*International Federation*).)

The majority then moves on to its primary focus: the public's interest. Relying on *Commission on Peace Officer Standards*, the majority first identifies the public's interest generally in “the conduct of its peace officers”—specifically, the “[m]isuse’ ” of their authority—and asserts that, “when it comes to the disclosure of a peace officer's name,” this interest “outweighs, in most cases, the officer's personal privacy interest.” (Maj. opn., ***70 ante, 172 Cal.Rptr.3d at p. 66, 325 P.3d at p. 468.) The majority next asserts that this general public interest “is particularly great” in connection with “officer-involved shootings” because “such shootings often lead to severe injury or death.” (Maj. opn., ante, at p. 66, 325 P.3d at p. 468.) This heightened public interest, the majority states, “tips” the balance here “strongly in favor of identity disclosure.” (*Id.* at p. 66, 325 P.3d at p. 469.)

The majority's discussion is unpersuasive for several reasons. First, the majority fails to explain how disclosing the name of an officer who has in any way been “involved in **472 officer involved shootings”—which is what the

Times seeks—provides any information about whether the involved officers “ ‘ [m]isuse[d] ’ ” their authority. (Maj. opn., *ante*, 172 Cal.Rptr.3d at p. 65, 325 P.3d at p. 467.) Thus, merely knowing which officers were “involved in officer involved shootings” does little, if anything, to advance the public's interest in “the conduct of its peace officers.” (Maj. opn., *ante*, at p. 66, 325 P.3d at p. 468.)

Second, the majority's assessment of the public's interest is inconsistent with the Legislature's and the voters' view of that interest. Through the *Pitchess* statutes (see maj. opn., *ante*, 172 Cal.Rptr.3d at pp. 60–61, 325 P.3d at pp. 464–465), the Legislature has precluded the general public from obtaining “[p]eace officer ... personnel records” or “information obtained from these records.” (Pen.Code, § 832.7, subd. (a).) It has specified that this restriction protects records “relating to” (1) an officer's “advancement, appraisal, or discipline” (*id.*, § 832.8, subd. (d)), and (2) “[c]omplaints, or investigations of complaints, concerning an event or transaction in which [an officer] participated, or which he or she perceived, and pertaining to the manner in which he or she performed his or her duties” (*id.*, § 832.8, subd. (e)). It has authorized law enforcement agencies to “disseminate data regarding the number, type, or disposition of complaints ... made against [their] officers” *only* “if that information is in a form which does not identify the individuals involved.” (*Id.*, § 832.7, subd. (c).) These provisions clearly express *the Legislature's* view regarding the public's interest in discovering whether particular officers have misused their power or even have been the subject of complaints about their conduct.

*79 The voters have ratified the Legislature's view by passing a constitutional provision that expressly preserves “statutory procedures governing discovery or disclosure of information concerning the official performance or professional qualifications of a peace officer.” (Cal. Const., art. I, § 3, subd. (b)(3).) The majority improperly ignores these expressions of policy by the Legislature and the voters, and improperly substitutes its own view of policy. As a court, we have neither prerogative nor power “to substitute our public policy judgment” for that of the Legislature and the voters. (*Thomas v. City of Richmond* (1995) 9 Cal.4th 1154, 1165, 40 Cal.Rptr.2d 442, 892 P.2d 1185.)

The majority errs in asserting that Penal Code section 830.10 “reflects a legislative policy that, generally, the public has a right to know the identity of an officer

involved in an on-duty shooting.” (Maj. opn., *ante*, 172 Cal.Rptr.3d at p. 65, 325 P.3d at p. 468.) That section provides: “Any uniformed peace officer shall wear a badge, nameplate, or other device which bears clearly on its face the identification number or name of the officer.” (Pen.Code, § 830.10.) On its face, the section applies only to “uniformed” officers. (*Ibid.*) Thus, to the extent it has any relevance to officers who are *not* in uniform, it indicates a legislative intent to protect their identities. Even as to uniformed officers, ***71 it fails to support the majority's broad conclusion that the public, “generally,” has a right to know the identity of officers involved in shootings. (Maj. opn., *ante*, at p. 64, 325 P.3d at p. 467.) Under the section, police departments may choose not to require their uniformed officers to display their names, and may instead require them only to display their “identification number[s].” (Pen.Code, § 830.10.) Even were the statute to require officers to display their names, a statute affording the immediate participants in a police encounter access to the officers' names does not reflect a far broader legislative policy that, “generally, the public has a right to know the identity of an officer involved in an on-duty shooting.” (Maj. opn., *ante*, at p. 65, 325 P.3d at p. 468.) This conclusion is obvious from the fact that, as noted above, the *Pitchess* statutes allow law enforcement agencies to “disseminate data regarding the number, type, or disposition of complaints ... made against [their] officers” *only* “if that information is in a form which does not identify the individuals involved.” (Pen.Code, § 832.7, subd. (c).) In other words, the Legislature has precluded release of identifying information *generally to the public* even though the names of officers against whom complaints have been made are known to those who have filed complaints. As the **473 majority recognized in *Commission on Peace Officer Standards*, “the mere fact that officers' names” may be displayed on their uniforms does not mean “that the information cannot be considered personal or private. (See *Department of Defense v. FLRA* (1994) 510 U.S. 487, 500, 114 S.Ct. 1006, 127 L.Ed.2d 325 ... [‘An individual's [privacy] interest in controlling the dissemination of information regarding personal matters does not dissolve *80 simply because that information may be available to the public in some form’].)”² (*Commission on Peace Officer Standards, supra*, 42 Cal.4th at p. 296, fn. 5, 64 Cal.Rptr.3d 661, 165 P.3d 462.)

Nor do I agree with the majority that, under section 6254, subdivision (f), “when a shooting by a peace

officer occurs during an arrest [citation] or in the course of responding to a complaint or request for assistance [citation], and when the officer's name is recorded as one of the factual circumstances of the incident, disclosure of the officer's name is generally required.” (Maj. opn., *ante*, 172 Cal.Rptr.3d at p. 64, 325 P.3d at p. 467.) [Section 6254, subdivision \(f\)](#), generally exempts from disclosure under the CPRA “[r]ecords of complaints to, or investigations conducted by, ... any state or local police agency.” As here relevant, it further provides that, “[n]otwithstanding any other provision of this subdivision,” a law enforcement agency “shall” disclose the following: (1) “the factual circumstances surrounding the arrest” of each person the agency arrests (§ 6254, subd. (f)(1)); and (2) the “nature of the response” to all complaints or requests for assistance the agency receives, “including, ***72 to the extent the information regarding crimes alleged or committed or any other incident investigated is recorded, ... the factual circumstances surrounding the crime or incident” (*id.*, subd. (f)(2)). Where one of the specified incidents involves a shooting, it is not at all clear that the “factual circumstances surrounding” the incident (*id.*, subd. (f)(1), (2)) include the names of officers involved in the shooting. The majority cites, and I have found, no case supporting that view. Moreover, the language stating that these disclosure provisions apply “[n]otwithstanding any other provision of *this subdivision*” (*id.*, subd. (f), italics added) indicates that the section's disclosure requirement does not override the confidentiality provisions found in other statutes. Our courts of appeal have so construed the statute. (*County of Los Angeles v. Superior Court* (1993) 18 Cal.App.4th 588, 600, 22 Cal.Rptr.2d 409 [“we cannot construe [section 6254, subdivision \(f\)](#), to require” disclosure of “law enforcement information” the *Pitchess* statutes make confidential].) Finally, the statute itself authorizes nondisclosure “to the extent that disclosure of a particular item of information would endanger the safety of a person involved in an investigation or would endanger the successful completion of the *81 investigation or a related investigation.” (§ 6254, subd. (f).) Because, in my view, this would include the names of officers involved in shootings, I do not agree that, even under the circumstances the majority posits, [section 6254, subdivision \(f\)](#), “generally require[s]” disclosure of the information the Times seeks.³ (Maj. opn., *ante*, at p. 64, 325 P.3d at p. 466.)

**474 The majority also makes several errors in evaluating the other side of the balance: the interests of the

officers in nondisclosure. Although relying principally on a heightened public interest in officer-involved shootings, the majority fails to consider or even acknowledge *the officer's* heightened privacy and safety interests in such cases. In this regard, *Commission on Peace Officer Standards*, on which the majority principally relies (maj. opn., *ante*, 172 Cal.Rptr.3d at pp. 65–66, 325 P.3d at pp. 467–468), actually supports the Union. There, in holding that “the typical peace officer has [no] more than an insubstantial privacy interest in the fact of his or her employment as an officer” (*Commission on Peace Officer Standards, supra*, 42 Cal.4th at p. 300, 64 Cal.Rptr.3d 661, 165 P.3d 462), the majority reasoned that the fact of employment is “innocuous information” (*id.* at p. 302, 64 Cal.Rptr.3d 661, 165 P.3d 462) because “it would not reveal [the ***73 officer's] involvement in any particular case” (*id.* at p. 302, fn. 12, 64 Cal.Rptr.3d 661, 165 P.3d 462, italics added). In this regard, the majority reasoned, disclosure of basic employment information is different from the disclosure sought in *Stone v. F.B.I.* (D.D.C.1990) 727 F.Supp. 662 (*Stone*): the names of FBI agents “who participated in the investigation of the assassination of Robert F. Kennedy.” (*Commission on Peace Officer Standards, supra*, 42 Cal.4th at p. 302, fn. 12, 64 Cal.Rptr.3d 661, 165 P.3d 462.) In *Stone*, “[w]hat could reasonably be expected to constitute an unwarranted invasion of an agent's privacy is not that he or she is revealed as an FBI agent but that he or she is named as an FBI agent *who participated in the RFK investigation.*” [Citation.]” (*Commission on Peace Officer Standards, supra*, at p. 302, fn. 12, 64 Cal.Rptr.3d 661, 165 P.3d 462.) The “ ‘concern is not with the identifying information *per se*, but with the connection between such information and some other detail—a statement, an event, or otherwise—which the individual would not wish to be publicly disclosed.’ ” (*Ibid.*, quoting *Halloran v. Veterans Admin.* (5th Cir.1989) 874 F.2d 315, 321.) Here, the information the *82 Times seeks *would* reveal the participation of the named officers in “particular case[s]” and *would* reveal their connection to an event—a shooting—they may “ ‘not wish to be publicly disclosed.’ ” (*Commission on Peace Officer Standards, supra*, at p. 302, fn. 12, 64 Cal.Rptr.3d 661, 165 P.3d 462.) As the majority opinion in *Commission on Peace Officer Standards* establishes, the officers therefore have a heightened privacy interest in nondisclosure. Moreover, the potentially incendiary nature of the information the Times seeks—an officer's involvement in a shooting—further heightens an officer's already elevated privacy

interest in not being linked to “particular case[s].” (*Ibid.*) The majority errs in failing even to acknowledge this heightened interest.

Finally, the majority's conclusion that the Union's claim under section 6254, subdivision (c), fails for lack of a “particularized showing” regarding the need for confidentiality (maj. opn., *ante*, 172 Cal.Rptr.3d at p. 65, 325 P.3d at p. 468) is both erroneous and inconsistent with our prior decisions. The majority acknowledges both the existence and validity of the “safety concerns of officers who fear retaliation from angry members of the community after an officer-involved shooting.” (Maj. opn., *ante*, at p. 66, 325 P.3d at p. 469.) It also acknowledges that *the record contains evidence* of “‘potential retaliation/threats’ against officers involved in shootings.” (Maj. opn., *ante*, at p. 67, 325 P.3d at p. 469.) However, the majority finds this evidence too “vague” and insists that more is required; as to each officer whose name is to be withheld, there must be evidence to “establish” a “specific danger” to the officer or to the members of the officer's family. (Maj. opn., *ante*, at p. 67, 325 P.3d at p. 469.)

****475** The specificity of proof the majority demands is inconsistent with our decision in *Times Mirror Co. v. Superior Court* (1991) 53 Cal.3d 1325, 283 Cal.Rptr. 893, 813 P.2d 240 (*Times Mirror*). There, we held that, because of safety concerns, the Governor of California had properly refused to disclose his daily, weekly, and monthly appointment calendars and schedules. (*Id.* at pp. 1329, 1346–1347, 283 Cal.Rptr. 893, 813 P.2d 240.) The only evidence supporting our conclusion was the declaration of the Governor's security director, which stated in the most general terms that disclosing this information “ ‘would seriously impair [his] ... ability to assure the Governor's security, and would constitute a potential threat to the Governor's safety, because the information ... will enable the ***74 reader to know in advance and with relative precision when and where the Governor may be found, those persons who will be with him, and when he will be alone.’ ” (*Id.* at p. 1346, 283 Cal.Rptr. 893, 813 P.2d 240, italics added.) Based on this evidence of a “ ‘potential threat to the Governor's safety’ ” (*ibid.*), and without requiring evidence of a particular or “specific” threat (maj. opn., *ante*, 172 Cal.Rptr.3d at p. 66, 325 P.3d at p. 468), we concluded that, even as to “outdated calendars and schedules,” nondisclosure was justified because “it is plausible to believe that an individual intent on doing

harm [to the Governor] could use such information to discern activity patterns of the Governor and identify areas of particular vulnerability.” (*Times Mirror, supra*, at p. 1346, 283 Cal.Rptr. 893, 813 P.2d 240.) Here, based on ***83** the Cox declaration, it is plausible to believe there are individuals, intent on doing harm to police officers in retaliation for their involvement in a shooting, who could use the requested information to exact revenge on the officers or members of their families. The “showing” in this case regarding safety concerns is certainly no more “vague,” and is at least as, if not more, “particularized” (maj. opn., *ante*, at p. 66, 325 P.3d at p. 469), than the showing we found sufficient in *Times Mirror*.⁴

The majority does not contend otherwise or explain why *Times Mirror* is inapplicable. Instead, in applying a different and far stricter standard, it simply ignores *Times Mirror*. It fails to explain why police officers and their family members are entitled to less protection than the Governor. Surely, their lives are not worth less. Nor is it less “plausible to believe” there are “individual[s] intent on doing harm” to police officers involved in shootings than it is to believe there are “individual[s] intent on doing harm” to the Governor. (*Times Mirror, supra*, 53 Cal.3d at p. 1346, 283 Cal.Rptr. 893, 813 P.2d 240.) On the contrary, as already noted, the majority acknowledges both the existence and validity of the “safety concerns of officers who fear retaliation from angry members of the community after an officer-involved shooting.” (Maj. opn., *ante*, 172 Cal.Rptr.3d at p. 66, 325 P.3d at p. 469.)

Contrary to the majority's suggestion (maj. opn., *ante*, 172 Cal.Rptr.3d at pp. 65–66, 325 P.3d at pp. 467–468), *Commission on Peace Officer Standards and International Federation* are consistent with, and supportive of, this analysis. In neither case was there any evidence submitted regarding the alleged safety concerns, a circumstance the court stressed in refusing to apply a disclosure exemption. (*Commission on Peace Officer Standards, supra*, 42 Cal.4th at p. 302, 64 Cal.Rptr.3d 661, 165 P.3d 462; *International Federation, supra*, 42 Cal.4th at pp. 337–338, 64 Cal.Rptr.3d 693, 165 P.3d 488.) Notably, after stating that “[a] mere assertion of possible endangerment” is insufficient to justify nondisclosure,” the majority in *Commission on Peace Officer Standards* cited *Times Mirror* as a case in which *****75** disclosure ****476** was justified because *the evidence*—the “declaration of [the] Governor's security director”—“supported [the]

conclusion that release of his schedules would present a potential security threat.” (*Commission on Peace Officer Standards, supra*, at p. 302, 64 Cal.Rptr.3d 661, 165 P.3d 462.) As earlier explained, here, even more than in *Times Mirror*, evidence regarding the dangers of disclosure was submitted. Moreover, in *Commission on Peace Officer Standards*, the majority held that, on remand, nondisclosure as to officers in certain “categories” could be justified “because the safety or *84 efficacy of” officers in those categories “would be jeopardized by disclosure.” (*Commission on Peace Officer Standards, supra*, 42 Cal.4th at p. 284, 64 Cal.Rptr.3d 661, 165 P.3d 462.) The majority in *Commission on Peace Officer Standards* identified one such category: officers “operating undercover.” (*Id.* at p. 301, 64 Cal.Rptr.3d 661, 165 P.3d 462.) The Times’s broad request for the names of all officers “involved in” shootings from January 1, 2005, until December 11, 2010, surely includes such officers. Moreover, the evidence in the record here establishes another category of officers whose safety would be jeopardized by disclosure: those who have been involved in a shooting.

Contrary to the majority’s suggestion, there is no basis for excluding from this category officers who, in using their weapons, “acted in a heroic manner that was unlikely to provoke retaliation.” (Maj. opn., *ante*, 172 Cal.Rptr.3d at p. 67, 325 P.3d at p. 469.) The majority asserts that safety is not “an issue” for such officers. (Maj. opn., *ante*, at p. 66, 325 P.3d at p. 468.) But the majority fails to explain how to distinguish between heroic acts that are likely to provoke retaliation and those that are not. And it is naïve to believe that the desire for revenge of friends, family members, and gang associates of those shot by police will be reduced, much less eliminated, by the fact that the officers acted heroically. Indeed, the majority’s bald assertion will surely come as surprising news to the many officers who, having heroically used their weapons in confronting gang-related crime, face retaliation from other gang members. It simply is not true, as the majority asserts, that officer safety is “not ...

an issue” whenever a shooting may be characterized as “heroic” and “unlikely to provoke retaliation.” (Maj. opn., *ante*, at p. 67, 325 P.3d at p. 469) Of course, as to individual officers who do not perceive a safety threat to themselves or their families, and who do not oppose public recognition of their heroism, [section 6254, subdivision \(c\)](#), would not prevent disclosure. Releasing an officer’s name under those circumstances would not constitute “an unwarranted invasion of personal privacy.” (*Ibid.*)

Finally, there are good reasons for not requiring, as to each officer whose name is to be withheld, evidence of an actual and specific threat to the officer or the members of his or her family. Where, as here, the disclosure request covers all officer-involved shootings during a six-year period, requiring such individualized proof will impose an obvious and substantial burden on law enforcement agencies that want to protect their officers.⁵ More importantly, ***76 as the Union observes, “killers do not usually announce their intentions in advance.” Thus, in most cases, although the threat to officer safety is real, the *85 kind of evidence the majority demands is not available. Because the lives of our officers and their families are at stake, I would not require a law enforcement agency to wait until there is a specific threat—or worse, an actual attack—before allowing it to withhold information that puts its officers and their families at risk. Absent a showing of some greater public need for the information, we should allow law enforcement agencies to protect the very officers who are out there every day protecting us. They deserve at least that much for their brave service.

I therefore dissent.⁶

All Citations

59 Cal.4th 59, 325 P.3d 460, 172 Cal.Rptr.3d 56, 199 L.R.R.M. (BNA) 3501, 42 Media L. Rep. 2105, 14 Cal. Daily Op. Serv. 5853, 2014 Daily Journal D.A.R. 6795


Footnotes

* Retired Associate Justice of the Supreme Court, assigned by the Chief Justice pursuant to [article VI, section 6 of the California Constitution](#).

1 The Times contends that it was not properly served with the Cox declaration. The Times does not, however, assert that it raised that issue in the trial court, and hence the issue appears to have been forfeited. In any case, as discussed below, the trial court concluded that the facts asserted in the Cox declaration were too general and speculative to support the

Union's request for injunctive relief. Therefore, any failure to properly serve the Cox declaration did not adversely affect the Times.

- 2 Both the trial court and the Court of Appeal rejected the Times's legal issue that [Government Code sections 6258 and 6259](#) set forth the exclusive means for litigating whether requested records must be disclosed and that therefore declaratory relief was inappropriate. (See *Filarsky v. Superior Court* (2002) 28 Cal.4th 419, 121 Cal.Rptr.2d 844, 49 P.3d 194 [holding that a city is not entitled to declaratory relief regarding its disclosure obligations under the California Public Records Act, but not deciding whether a third party—such as the Union here—is entitled to such relief].) We did not grant review to decide that legal issue, and we express no view on the matter. The issue remains open, and the Times can reassert it in any future proceedings.
- 1 All further unlabeled statutory references are to the Government Code.
- 2 The majority cites no legislative history to support its view of the “legislative policy” [Penal Code section 830.10](#) “reflects.” (Maj. opn., ante, 172 Cal.Rptr.3d at p. 65, 325 P.3d at p. 468.) The statute derives from its substantively identical predecessor, Penal Code former section 830.7, which provided: “Any uniformed peace officer shall wear a badge, nameplate, or other device which bears clearly on its face the identification number or name of such officer.” (Stats.1969, ch. 1458, § 1, p. 2978.) In the only illuminating item of legislative history I could find—a letter to the Governor urging him to sign the passed bill containing the statute—the bill's legislative author stated that it would “aid[] morale in that it goes far to halt the deindividualization of our law enforcement personnel.” (Assemblyman John Miller, letter to Governor Ronald Reagan re Assem. Bill No. 1830 (1969 Reg. Sess.) Aug. 8, 1969, p. 1.) This letter does not support the majority's assertion.
- 3 The majority asserts that the disclosure exemption of [section 6254, subdivision \(f\)](#), does not apply because the requested information comes from a source other than “the records of any administrative or criminal investigation” of officer-involved shootings (maj. opn., ante, 172 Cal.Rptr.3d at p. 66, 325 P.3d at p. 469), perhaps “the initial incident reports” of such shootings (maj. opn., ante, at p. 61, 325 P.3d at p. 464). The appellate record offers no basis for the majority's speculation regarding the source of the requested information, as to either the Zerby shooting or any of the other officer-involved shootings that occurred during the six-year period the request identifies. Nor does the majority offer any legal basis for construing the broadly worded phrase “records relating to ... [¶] ... [¶] ... [e]mployee ... appraisal[] or discipline,” which defines one category of confidential personnel records under [Penal Code section 832.8, subdivision \(d\)](#), to apply narrowly “only” to “the records generated in connection with” officer appraisal or discipline (maj. opn., ante, at pp. 63–64, 325 P.3d at pp. 466–467). Had the Legislature intended to so limit the scope of confidentiality under this section, it easily could have used the majority's far narrower phrase.
- 4 Moreover, although there is a greater showing in this case regarding safety than in *Times Mirror*, the showing needed to justify nondisclosure here arguably is less than the showing that was needed in *Times Mirror*. Nondisclosure is proper under [section 6254, subdivision \(c\)](#), upon a showing that disclosure “would constitute an unwarranted invasion of personal privacy.” In *Times Mirror*, we held that nondisclosure was proper under [section 6255](#), which requires a showing that “on the facts of the particular case the public interest served by not disclosing the record clearly outweighs the public interest served by disclosure of the record.” (Italics added; see *Times Mirror, supra*, 53 Cal.3d at pp. 1346–1347, 283 Cal.Rptr. 893, 813 P.2d 240.)
- 5 For example, according to reported statistics, the Los Angeles Police Department averaged 70 officer-involved shootings per year for the years 2005–2008. (L.A. Police Dept., Use of Force Annual Report, p. 16 < [http:// www.lapdonline.org/assets/pdf/2009YearEndReportFinal.pdf](http://www.lapdonline.org/assets/pdf/2009YearEndReportFinal.pdf)> as of May 29, 2014.) In 42 officer-involved shootings internally reviewed in 2009 for compliance with department policy, “[t]here were 278 substantially involved officers,” 85 of whom “discharged their firearms.” (*Id.* at p. 19.)
- 6 Given my conclusion, I do not further address the majority's analysis regarding the applicability of the exemptions set forth in [Government Code section 6255](#) and [Penal Code sections 832.7 and 832.8](#).

 KeyCite Yellow Flag - Negative Treatment
Distinguished by [City and County of San Francisco v. Western Air Lines, Inc.](#), Cal.App. 1 Dist., May 28, 1962

33 Cal.2d 635, 204 P.2d 7

THE CITY OF NATIONAL CITY et al., Petitioners,

v.

GILBERT E. FRITZ, as City
Mayor, etc., et al., Respondents.

L. A. No. 20857.

Supreme Court of California

Mar. 22, 1949.

HEADNOTES

(1)

Municipal Corporations § 161--Funds--Capital Outlays. The term "utilities," as used in the statutory restriction on the use of a municipal fund established for capital outlays (Stats. 1937, p. 1995, Deering's Gen. Laws, Act 8496a) means "public utilities," and does not include sewers; hence such a fund may be used for the construction of sewers.

See 18 **Cal.Jur.** 870, 1076.

SUMMARY

PROCEEDING in mandamus to compel the signing of a contract and the transfer of a fund to meet payments thereunder. Writ granted.

COUNSEL

Burke, Marshall & Burke and Daniel G. Marshall for Petitioners.

Merideth L. Campbell, City Attorney, for Respondents.

CARTER, J.

The controversy in this proceeding involves the interpretation of a statute authorizing the establishment by municipal corporations of capital outlay funds (Stats. 1937, p. 1995, as amended last in 1945; Stats. 1945, p. 1867).

That act provides that the governing body of any city "empowered to levy and collect assessments or taxes

may by ordinance provide for the levy and collection of assessments or taxes for the creation and accumulation of a fund for capital outlays." The general limitation on the right to impose taxes applies. "At any time after the creation of such a fund such governing body may transfer to such fund any unincumbered surplus funds remaining on hand in such city, ... at the end of any fiscal year.

"Whenever such fund is created in the manner aforesaid it shall remain inviolate for the making of any capital outlays and no moneys shall be disbursed therefrom excepting for such a purpose;

*"The term 'capital outlays' shall not be construed to include the construction, acquisition, extensions of, or additions to, *636 utilities, other than utilities for the furnishing of water supply."* (Emphasis added.)

In the instant case the city council passed an ordinance purporting to create a capital outlay fund pursuant to the act. There is a dispute in regard to whether the ordinance in fact achieved that end inasmuch as it did not provide for the levy of taxes or assessments for the creation of the fund. It merely created the fund. But in view of the result reached herein, it is not necessary to resolve that question. From the receipts from sale of real property of the city to the United States, \$983,800.29 was ordered deposited in the fund by the city council and it is now there and unencumbered. The council has awarded contracts for the construction of sewers in the city in the sum of \$675,287.77 but respondent mayor of the city refuses to sign the contracts, and respondent clerk refuses to transfer said sum to the general fund to meet the payments under those contracts, claiming that moneys in the capital outlay fund cannot be used for sewer purposes under the above quoted act for the reason that a sewer is a utility as used in the last sentence dealing with things for which the fund cannot be used. Petitioners, on the other hand, take the position (among others) that a sewer is not a utility as that term is used in the act. With the latter contention we agree for the following reasons.

(1) The unqualified word "utility" has a broad meaning. It is defined as "quality or state of being useful; usefulness; profitableness to some desired end." (Webster's New Internat. Dict. (2d ed.) p. 2808.) (See also [Interstate National Gas Co. v. Guley](#), 4 F.Supp. 697, 699.) If that definition were applied to the statute in question, there would be practically no activity in which the city could use

the money from the capital outlay fund because practically all of its property and public services are presumably for useful purposes. Thus the exception in the act (the italicized part thereof) for which funds may not be used would be broader than the main purpose of the act to authorize the creation of, and levy of taxes for, a capital outlay fund. Practically the only use that could be made of the fund would be for a water supply which is an exception carved out of an exception. These factors, coupled with the rule that exceptions in a statute are to be strictly construed (*Hurst v. City & County of San Francisco*, ante, p. 298 [201 P.2d 805]; *McAlpine v. Baumgartner*, 10 Cal.2d 409 [74 P.2d 753]; *Dufton v. Daniels*, 190 Cal. 577 [213 P. 949]; *Forbes v. City of Los Angeles*, 101 Cal.App. 781 [282 P. 528]; Crawford, Statutory Construction, § 299), require that the word "utility" be interpreted to mean a "public utility," for as will be seen, that term as used here has a more narrow meaning than "utility."

We are convinced that the construction and maintenance of a sewer system is not a "public utility" within the meaning of the act. Generally speaking statutes should be construed in the light of other statutes dealing with the same subject matter. (*In re Phyle*, 30 Cal.2d 838 [186 P.2d 134]; *Stillwell v. State Bar*, 29 Cal.2d 119 [178 P.2d 313].) The term "public utilities," with reference to the power of a municipal corporation to acquire and operate them, customarily embraces an enterprise which was usually engaged in by private corporations or individuals such as supplying water and electricity to the inhabitants. In this state it never has been the custom to have sewers operated privately. There was some doubt whether municipal corporations could acquire and operate such enterprises (public utilities) until the amendment to the Constitution (Cal. Const., art. XI, § 19) in 1911 authorizing such corporations to supply their inhabitants with light, water, power, heat, transportation and means of communications (18 Cal.Jur. 1076), but the power of municipal corporations to construct and maintain sewers has always been broad and unquestioned;

the power may be derived from the authority to construct and maintain streets. (See *Harter v. Barkley*, 158 Cal. 742 [112 P. 556]; *Kramer v. Los Angeles*, 147 Cal. 668 [82 P. 334]; *McBean v. City of Fresno*, 112 Cal. 159, 163 [44 P. 358, 53 Am.St.Rep. 191, 31 L.R.A. 794]; *City of Madera v. Black*, 181 Cal. 306, 313 [184 P. 397]). The Public Utilities Act of this state lists many activities as "public utilities" but no mention is made of sewers (Stats. 1915, p. 115, as amended).

For the foregoing reasons it is clear that the term "utilities" as used in the exception in the statute in question does not include sewers. The fund here involved may, therefore, be used for construction of sewers.

Let a peremptory writ of mandate issue as prayed for.

Gibson, C. J., Shenk, J., Traynor, J., Schauer, J., and Spence, J., concurred.

EDMONDS, J.

Again the court has rendered what I consider to be an advisory opinion in a collusive proceeding *638 brought by a city against two of its officers. The result is a decision which places the stamp of the highest judicial approval upon financial transactions which affect every taxpayer of the city without any truly adversary presentation of the merits of the controversy. Moreover, the construction of the statute authorizing the establishment of a capital outlay fund may now be the unquestioned basis for action by the governing body of other cities. For the reasons I have stated in *City of Whittier v. Dixon*, 24 Cal.2d 664, 668 [151 P.2d 5, 153 A.L.R. 956]; *City and County of San Francisco v. Boyd*, 22 Cal.2d 685, 707 [140 P.2d 666]; *City and County of San Francisco v. Linares*, 16 Cal.2d 441, 448 [106 P.2d 369], I believe that this procedure is contrary to fundamental principles of the administration of justice.



KeyCite Yellow Flag - Negative Treatment

Declined to Extend by *NCDR, L.L.C. v. Mauze & Bagby, P.L.L.C.*, 5th Cir.(Tex.), March 11, 2014

49 Cal.4th 12

Supreme Court of California

SIMPSON STRONG–TIE COMPANY,
INC., Plaintiff and Appellant,

v.

Pierce GORE et al., Defendants and Respondents.

No. S164174.

|

May 17, 2010.

Synopsis

Background: Manufacturer of name-brand galvanized screws brought claims for defamation, trade libel, false advertising, and unfair business practices against attorney, relating to attorney's newspaper advertisement stating that owners of wood decks, built with certain brand-name galvanized screws, “may” have legal rights to compensation or other relief. The Superior Court, Santa Clara County, No. CV057666, *John F. Herlihy, J.*, granted attorney's special motion to strike under the anti-SLAPP (strategic lawsuit against public participation) statute. Manufacturer appealed. The Court of Appeal affirmed. The Supreme Court granted review, superseding the opinion of the Court of Appeal.

Holdings: The Supreme Court, *Baxter, J.*, held that:

[1] plaintiff has burden of establishing the applicability of a statutory exemption from anti-SLAPP statute, disapproving *Brill Media Co., LLC v. TCW Group, Inc.*, 132 Cal.App.4th 324, 33 Cal.Rptr.3d 371, and

[2] “commercial speech” exemption from anti-SLAPP statute was inapplicable.

Affirmed.

Opinion, 76 Cal.Rptr.3d 292, superseded.

West Headnotes (16)

[1] Pleading**➤ Frivolous pleading**

For purposes of anti-strategic lawsuit against public participation (SLAPP) statute, a “SLAPP” is a civil lawsuit that is aimed at preventing citizens from exercising their political rights or punishing those who have done so. *West's Ann.Cal.C.C.P. § 425.16.*

48 Cases that cite this headnote

[2] Pleading**➤ Frivolous pleading**

The commercial speech exemption, like the public interest exemption, is a statutory exception to the anti-strategic lawsuit against public participation (SLAPP) statute and should be narrowly construed. *West's Ann.Cal.C.C.P. §§ 425.16, 425.17(b, c).*

11 Cases that cite this headnote

[3] Pleading**➤ Application and proceedings thereon**

The plaintiff has the burden of establishing the applicability of the “commercial speech” statutory exemption from the anti-strategic lawsuit against public participation (SLAPP) statute, in opposing the defendant's anti-SLAPP motion; disapproving *Brill Media Co., LLC v. TCW Group, Inc.*, 132 Cal.App.4th 324, 33 Cal.Rptr.3d 371. *West's Ann.Cal.C.C.P. § 425.17(c); West's Ann.Cal.Evid.Code § 500.*

63 Cases that cite this headnote

[4] Contracts**➤ Presumptions and burden of proof****Statutes****➤ Burden of proof**

It is a legal principle that when a proviso carves an exception out of the body of a

statute or contract those who set up such exception must prove it.

[3 Cases that cite this headnote](#)

[5] Statutes

🔑 Burden of proof

The enactment of the statute providing that except as otherwise provided by law, “a party has the burden of proof as to each fact the existence or nonexistence of which is essential to the claim for relief or defense that he is asserting,” did not upset the traditional rule of statutory construction that when a proviso carves an exception out of the body of a statute or contract those who set up such exception must prove it. [West's Ann.Cal.Evid.Code § 500](#).

[8 Cases that cite this headnote](#)

[6] Evidence

🔑 Elements of cause of action or claim

Evidence

🔑 Matters of Defense and Rebuttal

The general principle of the statute providing that except as otherwise provided by law, “a party has the burden of proof as to each fact the existence or nonexistence of which is essential to the claim for relief or defense that he is asserting,” is that a party who seeks a court's action in his favor bears the burden of persuasion thereon. [West's Ann.Cal.Evid.Code § 500](#).

[6 Cases that cite this headnote](#)

[7] Evidence

🔑 Nature and scope in general

The ordinary rules governing allocation of the burden of proof may be disregarded for policy reasons in exceptional circumstances, yet such exceptions are few, and narrow, and the reasons justifying a shift in the normal allocation of the burden of proof must be compelling.

[3 Cases that cite this headnote](#)

[8] Pleading

🔑 Frivolous pleading

The “commercial speech” exemption from the anti-strategic lawsuit against public participation (SLAPP) statute does not prescribe “content” and “delivery” exemptions with distinctly different elements. [West's Ann.Cal.C.C.P. § 425.17\(c\)\(1\)](#).

[8 Cases that cite this headnote](#)

[9] Statutes

🔑 Purpose and intent

In any case involving statutory interpretation, the court's fundamental task is to determine the Legislature's intent so as to effectuate the law's purpose.

[1 Cases that cite this headnote](#)

[10] Statutes

🔑 Language and intent, will, purpose, or policy

Statutes

🔑 Literal, precise, or strict meaning;letter of the law

Statutes

🔑 Unintended or unreasonable results; absurdity

Statutes

🔑 Relation to plain, literal, or clear meaning;ambiguity

In construing a statute, courts begin with the text of the statute as the best indicator of legislative intent but courts may reject a literal construction that is contrary to the legislative intent apparent in the statute or that would lead to absurd results.

[9 Cases that cite this headnote](#)

[11] Pleading

🔑 Frivolous pleading

Statements or conduct made during the delivery of goods or services would qualify as statements or conduct made “in the course of” delivering goods or services, within meaning of the “commercial speech” statutory exemption from the anti-strategic lawsuit against public participation (SLAPP) statute. [West's Ann.Cal.C.C.P. § 425.17\(c\)\(1\)](#).

[35 Cases that cite this headnote](#)

[12] Pleading

🔑 Frivolous pleading

The “commercial speech” exemption from the anti-strategic lawsuit against public participation (SLAPP) statute exempts a cause of action arising from commercial speech when (1) the cause of action is against a person primarily engaged in the business of selling or leasing goods or services; (2) the cause of action arises from a statement or conduct by that person consisting of representations of fact about that person's or a business competitor's business operations, goods, or services; (3) the statement or conduct was made either for the purpose of obtaining approval for, promoting, or securing sales or leases of, or commercial transactions in, the person's goods or services or in the course of delivering the person's goods or services; and (4) the intended audience for the statement or conduct meets the definition set forth in the statute. [West's Ann.Cal.C.C.P. § 425.17\(c\)](#).

[45 Cases that cite this headnote](#)

[13] Pleading

🔑 Frivolous pleading

Galvanized screw manufacturer's claims against attorney for defamation, trade libel, false advertising, and unfair business practices, relating to attorney's newspaper advertisement stating that owners of wood decks built with the screws “may” have legal rights to compensation or other relief, did not arise from representations of fact about attorney's “business operations, goods,

or services,” and thus were not within the “commercial speech” exemption from the anti-strategic lawsuit against public participation (SLAPP) statute; even if the advertisement created the inference that attorney had investigated manufacturer, any implication that manufacturer's screws were defective was a representation about manufacturer's products rather than about attorney's business operations. [West's Ann.Cal.C.C.P. § 425.17\(c\)\(1\)](#).

See Cal. Civil Practice (Thomson Reuters 2010) Civil Rights Litigation, § 14:10; 5 Witkin, Cal. Procedure (5th ed. 2008) Pleading, § 1026; Weil & Brown, Cal. Practice Guide: Civil Procedure Before Trial (The Rutter Group 2009) ¶ 7:555 et seq. (CACIVP Ch. 7(II)-B); Cal. Jur. 3d, Constitutional Law, § 270.

[5 Cases that cite this headnote](#)

[14] Pleading

🔑 Frivolous pleading

The representation that an attorney would investigate “whether you have a potential claim,” in attorney's newspaper advertisement seeking potential plaintiffs for class action against galvanized screw manufacturer, did not constitute a representation of fact about attorney's business operations, goods, or services, and thus was not within the commercial speech exemption to the anti-strategic lawsuit against public participation (SLAPP) law; the statement was not a representation of fact, but an agreement to take certain actions in the future. [West's Ann.Cal.C.C.P. § 425.17\(c\)\(1\)](#).

[3 Cases that cite this headnote](#)

[15] Pleading

🔑 Frivolous pleading

Under the “commercial speech” exemption from the anti-strategic lawsuit against public participation (SLAPP) statute the statement or conduct giving rise to the cause of action must consist of factual representations about

the speaker's or a competitor's goods, services, or business operations; it would not be sufficient for the statement giving rise to the cause of action to appear in the same publication as factual representations about the speaker's or a competitor's business. [West's Ann.Cal.C.C.P. § 425.17\(c\)\(1\)](#).

[24 Cases that cite this headnote](#)

[16] Pleading

🔑 Frivolous pleading

A party should not be able to defeat the commercial speech exception to the anti-strategic lawsuit against public participation (SLAPP) statute by parsing a two-sentence advertisement into its component parts; the proper test does not turn on the punctuation used in the advertisement, but on the basis for the cause of action. [West's Ann.Cal.C.C.P. § 425.17\(c\)\(1\)](#).

[1 Cases that cite this headnote](#)

Attorneys and Law Firms

***332 Shartsis Friese, [Arthur J. Shartsis](#), [Erick C. Howard](#), San Francisco; Eisenberg and Hancock, [Jon B. Eisenberg](#) and [William N. Hancock](#), San Francisco, for Plaintiff and Appellant.

Davis Wright Tremaine, [Thomas R. Burke](#), San Francisco, and [Rochelle L. Wilcox](#), Los Angeles, for Defendants and Respondents.

Arkin & Glovsky, Pasadena, and Sharon Arkin for Consumer Attorneys of California as Amicus Curiae on behalf of Defendants and Respondents.

Levy, Ram & Olson and [Karl Olson](#), San Francisco, for Senator Sheila Kuehl and California First Amendment Coalition as Amici Curiae on behalf of Defendants and Respondents.

Opinion

[BAXTER, J.](#)

***16 **1120** In this case we consider the scope of the commercial speech exemption to the anti-SLAPP statute. (See [Code Civ. Proc., §§ 425.16, 425.17, subd. \(c\)](#).)¹

In February 2006, plaintiff Simpson Strong-Tie Company, Inc. (Simpson) filed this action for defamation and related claims against defendants Pierce Gore and The Gore Law Firm arising from a newspaper advertisement placed by Gore a few weeks earlier. The advertisement, which was directed to owners of wood decks constructed after January 1, 2004, advised readers that “you may have certain legal rights and be entitled to monetary compensation, and repair or replacement of your deck” if the deck was built with galvanized screws manufactured by Simpson or other specified entities, and invited those persons to contact Gore “if you would like an attorney to investigate whether you have a potential claim.”

17** Gore moved successfully in the superior court to have the entire complaint stricken under [section 425.16](#), the anti- **333** SLAPP statute, and the Court of Appeal affirmed. We granted review to consider the limited issue whether Simpson's complaint was exempt from the anti-SLAPP statute because of [section 425.17, subdivision \(c\) \(section 425.17\(c\)\)](#), which excludes causes of action arising from representations of fact about the speaker's or a competitor's “business operations, goods, or services ... made for the purpose of obtaining approval for, promoting, or securing sales or leases of, or commercial transactions in, the person's goods or services” or “made in the course of delivering the person's goods or services.” Having found that the complaint is not exempt from dismissal under the anti-SLAPP statute, we affirm.

BACKGROUND

Plaintiff Simpson is a California corporation in the business of designing, manufacturing, and marketing building products, including metal connectors and other hardware for use in wood frame construction. According to Simpson, it is well known in the wood frame construction industry that pressure-treated wood, which is commonly used in outdoor decks to protect against termites and fungal decay, can have a corrosive effect on steel products, including galvanized screws. Corrosion potentially shortens the service life of these fasteners and connectors and compromises their ability to support their

recommended loads or endure seismic and environmental stresses.

In early 2004, at the recommendation of the United States Environmental Protection Agency, the construction industry stopped selling lumber treated with chromium copper arsenate, due to health hazards posed by its arsenic content. Alternative lumber products, such as wood treated with alkaline copper quaternary and copper azole, were substituted, but, as Simpson explains, these chemicals are “more corrosive” to galvanized steel products. Simpson states that it communicated this potential problem to the building industry and to the public generally through its Web site, annual catalog, articles in engineering and building magazines, bulletins issued to the building industry, point-of-sale information, and annual report.

Gore, a California attorney, learned from television reports about the potential for corrosion of galvanized deck fasteners and connectors when used on wood pressure treated with alkaline copper quaternary or copper azole, and contacted Ted Todd, a senior inspector with the Contra Costa *18 County District Attorney's Office who was featured in the television reports. At that time, the district attorney's office was conducting an investigation into the risk posed by galvanized fasteners and connectors when used with these types of pressure-treated wood. The office ultimately issued a “Consumer Alert” warning of the corrosive effect of the **1121 new pressure-treated wood products “on the metal connector brackets typically used in construction.” The alert noted that advisories had been posted in some retail stores about the potential incompatibility of the two products but cautioned that the advisories “tend to be in very small print or somewhat inconspicuously posted.”

Gore also visited the company Web site, where Simpson had advised in bold type that “[m]any of the new Pressure Treated Woods use chemicals that are corrosive to steel. By selecting connectors that offer greater corrosion resistance ... you can extend the service life of your connectors. However, corrosion will still occur. You should perform periodic inspection of your connectors and fasteners to insure their strength is not being adversely affected by corrosion. In some cases, it may be necessary to have a local professional perform ***334 the inspections. Because of the many variables involved,

Simpson Strong-Tie cannot provide estimates on service life of connectors, anchors or fasteners.”

In addition, Gore discovered that a class action complaint had been filed in Massachusetts against one of Simpson's competitors, Phillips Fastener Products, Inc., which sought relief on behalf of consumers allegedly damaged by defective galvanized fasteners and connectors used with pressure-treated lumber, and that Gore's former law firm, Lieff, Cabraser, Heimann & Bernstein, LLP, was investigating claims that some of the newly designed fasteners were failing, in spite of the manufacturers' representations that the “special coatings” were intended to resist corrosion.

Based on this information, Gore arranged for an advertisement to be placed in the San Jose Mercury News in order to locate individuals who had purchased galvanized fasteners and connectors manufactured by Simpson and two other companies, which together were responsible for most of the metal fasteners sold to consumers in California. The advertisement, which commenced Christmas Day 2005 and ran four more times over a 28-day period in the Mercury News and once in the Los Gatos Weekly-Times, read as follows:

*19

ATTENTION:

WOOD DECK OWNERS

If your deck was built after January 1, 2004 with galvanized screws manufactured by Phillips Fastener Products, Simpson Strong-Tie or Grip-Rite, you may have certain legal rights and be entitled to monetary compensation, and repair or replacement of your deck.

Please call if you would like an attorney to investigate whether you have a potential claim:

Pierce Gore
GORE LAW FIRM
900 East Hamilton Ave.
Suite 100 Campbell, CA 95008
408-879-7444

Gore has asserted that the wording of the advertisement was modeled after notices he or his cocounsel had used in this state and in others during the preceding three years in connection with potential class actions based on consumer fraud or product defects.

**1122 In a letter dated January 9, 2006, counsel for Simpson advised Gore that the advertisement falsely implied that Simpson's galvanized screws fail to meet

appropriate industry standards and that a valid claim may exist against Simpson based upon negligence or product liability. The letter demanded that Gore cease publication of any further defamatory advertisements directed at Simpson and reserved Simpson's right to recover against Gore for any costs ***335 or damages that may have already resulted from this or any similar publication. Gore did not respond to the letter. In a letter dated January 27, 2006, counsel for Simpson declared that Gore's failure to respond "suggests that your claims are without merit, and that your newspaper advertisement is false, misleading, and defames Simpson.... Unless you can present specific evidence to support your charges, Simpson intends to pursue its defamation claim against your firm[] and vindicate its rights." Again, Gore did not respond.

Prior to filing this action, Simpson retained an opinion survey firm to confirm that the advertisement had caused injury to Simpson's reputation. The survey firm intercepted 214 randomly selected shoppers at nine different *20 home improvement stores in January and February 2006 and obtained their responses to a set of questions with and without exposure to the Gore advertisement. The survey revealed that the shoppers, after reading the advertisement, were significantly more likely to believe that Simpson's galvanized screws were defective or of low quality and were significantly less likely to purchase galvanized screws manufactured by Simpson.

Two days after the survey was completed, Simpson filed this action for defamation, trade libel, false advertising, and unfair business practices. The complaint sought compensatory and punitive damages as well as injunctive relief.

When Gore moved to strike the complaint under section 425.16, Simpson invoked the exemption to the anti-SLAPP law for commercial speech under section 425.17(c). The trial court granted the special motion to strike and entered a judgment of dismissal, finding Gore had made a threshold showing that the statements were made in furtherance of his right of petition or free speech on an issue of public interest (§ 425.16, subd. (e)(4)), that Simpson had failed to demonstrate a probability of prevailing on the merits (§ 425.16, subd. (b)(1)), and that the commercial speech exemption did not apply because the advertisement made no statement about a business competitor's products or services.

The Court of Appeal affirmed in a published opinion. The court first considered "who bears the burden of persuasion with respect to the applicability of [the section 425.17(c)] exemption—the party invoking the anti-SLAPP law (i.e., the defendant), or the party invoking the exemption (the plaintiff)?" In assigning the burden to the plaintiff, the Court of Appeal disagreed with *Brill Media Co., LLC v. TCW Group, Inc.* (2005) 132 Cal.App.4th 324, 33 Cal.Rptr.3d 371 (*Brill*), which had assigned the burden to the defendant to establish that the cause of action is *not* exempt. The court next determined that while the advertisement was "made for the purpose of ... promoting ... [Gore's] services" (§ 425.17(c)(1)), Simpson's causes of action did not "aris[e] from" any representation of fact " 'about' Gore's or a competitor's services or business operations."

In construing the exemption in section 425.17(c)(1) for causes of action arising from statements or conduct "made in the course of delivering the person's goods or services," the Court of Appeal once again disagreed with *Brill*, which had found this prong was satisfied where "the statements were made and conduct engaged in as part of....the type of business transaction engaged in by defendants." (*Brill, supra*, 132 Cal.App.4th at p. 341, 33 Cal.Rptr.3d 371.) The Court of Appeal reasoned that the Legislature had enacted instead "a much narrower exemption, predicated by its plain terms on conduct in the course of *21 delivering the goods or services the defendant is in the business of selling or ***336 leasing." The court then found that the advertisement here "was seeking business from prospective clients, not delivering services to them." Concluding that the anti-SLAPP statute applied and that Simpson had failed to establish a probability **1123 of prevailing on any of its claims, the Court of Appeal affirmed the order granting the special motion to strike and the judgment of dismissal.

We granted review to address the conflict in the case law concerning the construction of the commercial speech exemption to the anti-SLAPP statute.

DISCUSSION

[1] A SLAPP is a civil lawsuit that is aimed at preventing citizens from exercising their political rights or punishing those who have done so. " 'While SLAPP suits masquerade as ordinary lawsuits such as defamation

and interference with prospective economic advantage, they are generally meritless suits brought primarily to chill the exercise of free speech or petition rights by the threat of severe economic sanctions against the defendant, and not to vindicate a legally cognizable right.’ ” (*Castillo v. Pacheco* (2007) 150 Cal.App.4th 242, 249–250, 58 Cal.Rptr.3d 305, quoting Sen. Com. on Judiciary, Analysis of Sen. Bill No. 1296 (1997–1998 Reg. Sess.) as amended May 12, 1997, pp. 1–2.)

In 1992, out of concern over “a disturbing increase” in these types of lawsuits, the Legislature enacted [section 425.16](#), the anti-SLAPP statute. (§ 425.16, subd. (a).) The statute authorized the filing of a special motion to strike to expedite the early dismissal of these unmeritorious claims. (§ 425.16, subds. (b)(1), (f).) To encourage “continued participation in matters of public significance” and to ensure “that this participation should not be chilled through abuse of the judicial process,” the Legislature expressly provided that the anti-SLAPP statute “shall be construed broadly.” (§ 425.16, subd. (a).)

A special motion to strike involves a two-step process. First, the defendant must make a prima facie showing that the plaintiff’s “cause of action ... aris[es] from” an act by the defendant “in furtherance of the [defendant’s] right of petition or free speech ... in connection with a public issue.”² (§ 425.16, subd. (b)(1).) If a defendant meets this threshold showing, the cause of action shall be stricken unless the plaintiff can establish “a probability that the plaintiff will prevail on the claim.” (*Ibid.*)

In 2003, concerned about the “disturbing abuse” of the anti-SLAPP statute, the Legislature enacted [section 425.17](#) to exempt certain actions from it. *22 (§ 425.17, subd. (a).) We recently discussed the exemption for public interest lawsuits in *Club Members for an Honest Election v. Sierra Club* (2008) 45 Cal.4th 309, 86 Cal.Rptr.3d 288, 196 P.3d 1094, where we “narrowly construed” [section 425.17, subdivision \(b\)](#) and held that it applied “only when the entire action is brought in the public interest.” (*Club Members for an Honest Election, supra*, 45 Cal.4th at pp. 312, 316, 86 Cal.Rptr.3d 288, 196 P.3d 1094.)

This case involves the scope and operation of the exemption for commercial speech under [section 425.17\(c\)](#), which provides: “[Section 425.16](#) does not apply to any cause of action brought against a person primarily engaged in the business of selling or leasing goods

or services, including, but not limited to, insurance, securities, or financial instruments, arising from any statement or conduct by that person if both of the following conditions exist: [¶] ***337 (1) The statement or conduct consists of representations of fact about that person’s or a business competitor’s business operations, goods, or services, that is made for the purpose of obtaining approval for, promoting, or securing sales or leases of, or commercial transactions in, the person’s goods or services, or the statement or conduct was made in the course of delivering the person’s goods or services. [¶] (2) The intended audience is an actual or potential buyer or customer, or a person likely to repeat the statement to, or otherwise influence, an actual or prospective buyer or customer, ...”

[2] The commercial speech exemption, like the public interest exemption, “is a statutory exception to [section 425.16](#)” and “should be narrowly construed.” (*Club Members for an Honest Election v. Sierra Club, supra*, 45 Cal.4th at p. 316, 86 Cal.Rptr.3d 288, 196 P.3d 1094; see also **1124 *Major v. Silna* (2005) 134 Cal.App.4th 1485, 1494, 36 Cal.Rptr.3d 875; accord, Sen. Com. on Judiciary, Analysis of Sen. Bill No. 515 (2003–2004 Reg. Sess.) as amended May 1, 2003, pp. 7–8 [“before us for consideration in [Senate Bill] 515 is a measure that seeks to trim off a few bad branches as argued and identified by the [Consumer Attorneys of California]”].)

A. Which Party Bears the Burden to Establish the Applicability of the “Commercial Speech” Exemption Under [Section 425.17\(c\)](#)?

[3] The Court of Appeal determined that Simpson, as the plaintiff, bore the burden of establishing that Gore’s advertisement fell within the commercial speech exemption to the anti-SLAPP law, relying on the general rule that “[o]ne claiming an exemption from a general statute has the burden of proving that he comes within the exemption.” Simpson argues that the burden should have been placed on Gore, as the defendant, to establish that the exemption does *not* apply. He relies in particular on our summary in *Equilon Enterprises v. Consumer Cause, Inc.* (2002) 29 Cal.4th 53, 67, 124 Cal.Rptr.2d 507, 52 P.3d 685 (*Equilon*), of the “two-step process” for *23 analyzing anti-SLAPP motions: “First, the court decides whether the *defendant* has made a threshold showing that the challenged cause of action is one arising from protected activity.... If the court finds such a showing has been made, it then determines whether the *plaintiff*

has demonstrated a probability of prevailing on the claim.” (Italics added.) We agree with the Court of Appeal’s construction.

[4] It is a “familiar” and “longstanding” legal principle that “[w]hen a proviso ... carves an exception out of the body of a statute or contract those who set up such exception must prove it.” (*Meacham v. Knolls Atomic Power Laboratory* (2008) 554 U.S. 84, 128 S.Ct. 2395, 2400, 171 L.Ed.2d 283; see also *Trade Comm’n v. Morton Salt Co.* (1948) 334 U.S. 37, 44–45, 68 S.Ct. 822, 92 L.Ed. 1196 [“the burden of proving justification or exemption under a special exception to the prohibitions of a statute generally rests on one who claims its benefits ...”]; accord, 29 Am.Jur.2d (2008) Evidence § 176, p. 193.) Likewise, in California, “it has been declared that where the statute has exemptions, exceptions or matters which will avoid the statute the burden is on the claimant to show that he falls within that category.” (*Colonial Ins. Co. v. Ind. Acc. Com.* (1945) 27 Cal.2d 437, 441, 164 P.2d 490; see also *Briggs v. McCullough* (1869) 36 Cal. 542, 551–552; *In re Lorenzo C.* (1997) 54 Cal.App.4th 1330, 1345, 63 Cal.Rptr.2d 562 [“one who claims an exemption from a general statute has the burden of proving that he or she comes within the exemption”].)

***338 Simpson does not dispute that section 425.16 sets forth a general statute or that section 425.17 creates specified exemptions to it. Simpson contends, though, that the familiar and long-standing rule of statutory construction governing exemptions to a general statute was abrogated by the enactment in 1965 of Evidence Code section 500, which provides: “Except as otherwise provided by law, a party has the burden of proof as to each fact the existence or nonexistence of which is essential to the claim for relief or defense that he is asserting.”

[5] Although it is true that Evidence Code section 500 superseded former section 1981, which had provided that the burden of proof was on the party holding the affirmative of the issue, the change in wording did not upset the traditional rule of statutory construction. As the Law Revision Commission Comments to Evidence Code section 500 explain, the phrase the “ ‘affirmative of the issue’ ” in former section 1981 had been criticized “as establishing a meaningless standard,” inasmuch as “ ‘practically any proposition may be stated in either affirmative or negative form.’ ” (Cal. Law Revision Com. com., reprinted at 29B West’s Ann. Evid.Code (1995

ed.) foll. § 500, p. 554.) Evidence Code section 500 was intended to make the allocation of the burden of proof “easier to ascertain” than the “classic formulation,” but *24 not to signal a sea change in the law. (*Conservatorship of Hume* (2006) 140 Cal.App.4th 1385, 1388, fn. 5, 44 Cal.Rptr.3d 906; see also *Los Angeles Unified School Dist. v. Workers’ Comp. Appeals Bd.* (1984) 150 Cal.App.3d 823, 829, 198 Cal.Rptr. 116 [citing the two formulations together].) Tellingly, Simpson **1125 cites nothing to support its novel claim that Evidence Code section 500 abrogated the ordinary rule of statutory construction. (Cf. 31 Cal.Jur.3d (2002) Evidence § 90, p. 151 [“What facts are essential to a particular party’s claim for relief or defense is generally a matter to be determined by the substantive law, not the law of evidence; Evid.Code, § 500 does not purport to determine which facts are ‘essential’ to the plaintiff’s claim for relief and which facts are ‘essential’ to a claimed defense, but rather leaves those substantive determinations to be resolved in light of the particular cause of action or defense at issue,” (fns. omitted)].) Indeed, the Law Revision Commission Comments note that Evidence Code section 500 “follows th[e] basic rule”—i.e., “ ‘that whatever facts a party must affirmatively plead he also has the burden of proving’ ”—and is even broader, in that it “ appl[ies] to issues not necessarily raised in the pleadings.” (Cal. Law Revision Com. com., reprinted at 29B West’s Ann. Evid.Code, *supra*, foll. § 500, p. 554.) Inasmuch as Simpson concedes that “[t]he initial burden should be on the plaintiff to invoke the exemption in opposition to the anti-SLAPP motion,” it follows that the plaintiff also has the burden of proving the applicability of the exemption.

[6] Furthermore, the “general principle” of Evidence Code section 500 is “that a party who seeks a court’s action in his favor bears the burden of persuasion thereon.” (*Aguilar v. Atlantic Richfield Co.* (2001) 25 Cal.4th 826, 850, 107 Cal.Rptr.2d 841, 24 P.3d 493.) Because establishing the commercial speech exemption is essential to Simpson’s defense to the special motion to strike, Evidence Code section 500 places the burden of proof on Simpson. (See generally *City of Lafayette v. East Bay Mun. Utility Dist.* (1993) 16 Cal.App.4th 1005, 1017, 20 Cal.Rptr.2d 658 [“ ‘ ‘One seeking to be excluded from the sweep of the general statute must establish that the exception applies’ ”].)

Nothing in *Equilon* or its discussion of the “two-step process” alters the analysis. (*Equilon, supra*, 29 Cal.4th

at p. 67, 124 Cal.Rptr.2d 507, 52 P.3d 685.) In *Equilon*, ***339 we explained that the defendant has the burden to show that the cause of action being challenged under the anti-SLAPP statute is one arising from protected activity. (*Equilon, supra*, at p. 67, 124 Cal.Rptr.2d 507, 52 P.3d 685.) In discussing the defendant's burden at the first stage, *Equilon* construed only section 425.16, and did not purport to identify the party with the burden to establish the existence or nonexistence of the public interest exemption in section 425.17, subdivision (b), or the commercial speech exemption in section 425.17(c), inasmuch as *Equilon* predated the enactment of section 425.17. It is worth noting, though, that *25 nothing in *Equilon* purported to abrogate the long-standing rule of construction that the party seeking to benefit from an exception to a general statute bears the burden to establish the exception.³

[7] Simpson argues, correctly, that the ordinary rules governing allocation of the burden of proof may be disregarded for policy reasons in exceptional circumstances. (*Adams v. Murakami* (1991) 54 Cal.3d 105, 119–120, 284 Cal.Rptr. 318, 813 P.2d 1348; *Cassady v. Morgan, Lewis & Bockius LLP* (2006) 145 Cal.App.4th 220, 234, 51 Cal.Rptr.3d 527 (*Cassady*).) Yet such exceptions are “few, and narrow” (*Sargent Fletcher, Inc. v. Able Corp.* (2003) 110 Cal.App.4th 1658, 1670, 3 Cal.Rptr.3d 279), and the reasons justifying a shift in the normal allocation of the burden of proof must be “compelling.” **1126 (*Aydin Corp. v. First State Ins. Co.* (1998) 18 Cal.4th 1183, 1193, 77 Cal.Rptr.2d 537, 959 P.2d 1213; accord, *Meacham v. Knolls Atomic Power Lab., supra*, 554 U.S. at pp. 90–92, 128 S.Ct. at p. 2400.) Simpson fails to identify any compelling justification.

Simpson does assert that the facts underlying the commercial speech exemption are “peculiarly” within the speaker's knowledge. But Simpson does not explain how a plaintiff would be significantly disadvantaged in demonstrating that the statement or conduct underlying its cause of action “consists of representations of fact about [the defendant]'s or a business competitor's business operations, goods, or services”; that the defendant's statement or conduct was “made for the purpose of obtaining approval for, promoting, or securing sales or leases of, or commercial transactions in, the person's goods or services” or “in the course of delivering the persons' goods or services”; or that the “intended audience” was “an actual or potential buyer or customer,

or a person likely to repeat the statement to, or otherwise influence, an actual or potential buyer or customer.” (§ 425.17(c)(1), (2); see generally *Schaffer v. Weast* (2005) 546 U.S. 49, 60, 126 S.Ct. 528, 163 L.Ed.2d 387 [“ ‘Very often one must plead and prove matters as to which his adversary has superior access to the proof’ ”].) In sum, Simpson does not persuade us that section 425.17(c) presents ***340 one of those “ ‘rare occasions’ ” *26 justifying a deviation from the normal allocation of the burden of proof. (*Cassady, supra*, 145 Cal.App.4th at p. 234, 51 Cal.Rptr.3d 527.)

The burden of proof as to the applicability of the commercial speech exemption, therefore, falls on the party seeking the benefit of it—i.e., the plaintiff.

B. Were Simpson's Causes of Action Exempted from the Anti-SLAPP Statute by Section 425.17(c)?

As noted, section 425.17(c) provides, in pertinent part: “Section 425.16 does not apply to any cause of action brought against a person primarily engaged in the business of selling or leasing goods or services ... arising from any statement or conduct by that person if both of the following conditions exist: [¶] (1) The statement or conduct consists of representations of fact about that person's or a business competitor's business operations, goods, or services, that is made for the purpose of obtaining approval for, promoting, or securing sales or leases of, or commercial transactions in, the person's goods or services, or the statement or conduct was made in the course of delivering the person's goods or services. [¶] (2) The intended audience is an actual buyer or potential buyer or customer, or a person likely to repeat the statement to, or otherwise influence, an actual buyer or customer....”

There are no disputed issues of fact here. We review the applicability of the commercial speech exemption independently. (*Soukup v. Law Offices of Herbert Hafif* (2006) 39 Cal.4th 260, 269, fn. 3, 46 Cal.Rptr.3d 638, 139 P.3d 30.)

[8] The Court of Appeal held, and the parties' initial briefing assumed, that section 425.17(c)(1) prescribes a “content exemption” and a “delivery exemption” and that these exemptions have distinctly different elements. The content exemption shields a cause of action from the anti-SLAPP statute if the cause of action arises from a statement or conduct that “consists of representations of

fact about that person's or a business competitor's business operations, goods, or services, that is made for the purpose of obtaining approval for, promoting, or securing sales or leases of, or commercial transactions in, the person's goods or services.” (§ 425.17, subd. (c)(1).) The delivery exemption provides a similar shield for *any* statement or conduct “made in the course of delivering the person's goods or services.” (*Ibid.*) In other words, this approach divided the first 47 words of subdivision (c)(1) from the last 17 to create two independent and parallel theories of exemption from the anti-SLAPP law.

Although section 425.17(c)(1) is grammatically susceptible of such a construction, that construction was not necessarily the only plausible one. *27 Gore had observed, in a footnote in its initial briefing, that the statute might also be read to exempt a cause of action arising from a statement or conduct **1127 that consists of representations of fact about that person's or a competitor's business operations, goods, or services that was made *either* “for the purpose of obtaining approval for, promoting, or securing sales or leases of, or commercial transactions in, the person's goods or services” *or* “in the course of delivering the person's goods or services.” (§ 425.17(c)(1).) We granted the parties the opportunity to file supplemental briefing as to which construction was the correct one and, as will appear, agree with Gore's construction.

[9] [10] As in any case involving statutory interpretation, our fundamental task is to determine the Legislature's intent so as to effectuate the law's purpose. ***341 (*People v. Lewis* (2008) 43 Cal.4th 415, 491, 75 Cal.Rptr.3d 588, 181 P.3d 947.) “We begin with the text of the statute as the best indicator of legislative intent” (*Tonya M. v. Superior Court* (2007) 42 Cal.4th 836, 844, 69 Cal.Rptr.3d 96, 172 P.3d 402), but we may reject a literal construction that is contrary to the legislative intent apparent in the statute or that would lead to absurd results. (*Ornelas v. Randolph* (1993) 4 Cal.4th 1095, 1105, 17 Cal.Rptr.2d 594, 847 P.2d 560.)

Simpson's argument, at least at the outset, relies on the plain language of section 425.17(c)(1) and the canon of construction of avoiding surplusage. According to Simpson, section 425.17(c)(1) creates two independent commercial speech exemptions, each introduced by the phrase “the statement or conduct,” and to hold otherwise would render the second iteration of “the statement or

conduct” in the subdivision redundant. In Simpson's view, therefore, the delivery exemption encompasses a cause of action arising from “*any* statement or conduct made in the course of delivering the person's goods or services.” Gore argues that such a construction would contravene the legislative intent and lead to absurd results.

The Legislature's findings supporting the enactment of section 425.17 are set forth in subdivision (a), which states that “there has been a disturbing abuse of Section 425.16, the California Anti-SLAPP Law, which has undermined the exercise of the constitutional rights of freedom of speech and petition for the redress of grievances, contrary to the purpose and intent of Section 425.16. The Legislature finds and declares that it is in the public interest to encourage continued participation in matters of public significance, and that this participation should not be chilled through abuse of the judicial process or Section 425.16.”

The construction favored by Simpson does not effectively fulfill the statute's purposes. Under that construction, the Legislature can be seen to have carefully devised specific requirements in order to exempt a cause of *28 action under the content prong—i.e., the statement or conduct underlying the cause of action must (1) consist of representations of fact (2) about that person's or a business competitor's business operations, goods, or services, and (3) have been made for the purpose of obtaining approval for, promoting, or securing transactions in the person's goods or services. Yet, under Simpson's construction of the delivery prong, the Legislature apparently imposed no particular requirements—i.e., a cause of action arising from *any* statement or conduct on *any* subject for *any* purpose is exempted from the anti-SLAPP statute, as long as it was made in the course of delivering goods or services. Simpson has not offered any rationale for why the stage of the transaction should play such a critical factor in determining whether to exempt a cause of action from the reach of the anti-SLAPP law.

Moreover, under Simpson's approach, a business that was sued because of political or religious statements made by an employee *in the course of delivering* the product or service to a customer would be deprived of the protection of the anti-SLAPP law, but that same business would be able to invoke the anti-SLAPP law if the same statements were made for the purpose of obtaining approval for, promoting, or securing transactions in its

products. Neither the Legislature's findings nor common sense endorses or justifies such a result.

[11] Simpson effectively concedes that such a result would be problematic, but argues that the statements in these hypotheticals “are *not a part of* the delivery of ***342 goods **1128 or services” and thus fall outside the delivery exemption as Simpson would interpret it. But, as we recently observed, “[d]uring’ means ‘at some point in the course of.’” (*People v. Lewis, supra*, 43 Cal.4th at p. 514, 75 Cal.Rptr.3d 588, 181 P.3d 947.) Statements or conduct made *during* the delivery of goods or services thus would qualify as statements or conduct made *in the course of* delivering the goods or services. (Cf. § 425.17(c)(1).)

Simpson attempts to narrow the definition of the delivery exemption by combining language that appears in two different sentences in *Brill, supra*, 132 Cal.App.4th at page 341, 33 Cal.Rptr.3d 371, to argue that the exemption extends only to “ ‘statements ... made and conduct engaged in *as part of* ... the type of business transaction engaged in by defendants.’ ” But this formulation does not appear anywhere in the text of section 425.17(c)(1). If, as Simpson effectively concedes, the delivery prong requires an interpretive gloss to avoid absurd results, it seems more consonant with legislative intent to adopt the restriction the Legislature articulated earlier in the sentence setting forth the exemption rather than to rummage about elsewhere for new limitations arising out of whole cloth.

Moreover, Simpson's construction of the delivery prong would render the first part of section 425.17(c)(1)—the so-called “content and purpose” *29 prong—surplusage. Statements or conduct that are “ ‘part of ... the type of business transaction engaged in by defendants’ ” would necessarily encompass “representations of fact about that person's ... business operations, goods, or services, that [are] made for the purpose of obtaining approval for, promoting, or securing sales or leases of, or commercial transactions in, the person's goods or services” (§ 425.17(c)(1)) inasmuch as *every* business engages in efforts to obtain approval for, promote, or secure sales or transactions in its goods or services. Indeed, Simpson concedes that “a grocer's advertisement in advance of intended sales” falls within its broad definition of the delivery prong “to the extent the advertising informs the public about the availability of the product for delivery” *or* “to the extent the advertising keeps the product in the public eye and bolsters its prestige.” With such a broad definition of the

delivery prong, there would be no need for the content and purpose prong.

The legislative history further undermines Simpson's interpretation of the statute. Summaries of the bill prepared for various legislative committees consistently stated that section 425.17(c) would prohibit “the anti-SLAPP motion from being used in specified causes of action against businesses sued for statements or conduct consisting of representations of fact about their goods, services or business operations, or those of a competitor, when *those* statements or conduct were for the purpose of obtaining approval for, promoting, or securing sales or leases of the person's goods or services, *or* in the course of delivering the person's goods or services, if the intended audience is an actual or potential buyer or customer, or a person likely to repeat the statement to, or otherwise influence, an actual or potential buyer or customer, ...” (Legis. Analyst, 3d reading analysis of Sen. Bill No. 515 (2003–2004 Reg. Sess.) as amended July 8, 2003, p. 1, italics added; Assem. Com. on Judiciary, Analysis of Sen. Bill No. 515 (2003–2004 Reg. Sess.) as amended June 27, 2003, p. 2, italics added; Assem. Republican Caucus, analysis of Sen. Bill No. 515 (2003–2004 Reg. Sess.) as amended June 27, 2003, p. 1, italics added; see also Sen. Sheila Kuehl, letter to Governor Gray Davis, Sept. 3, 2003, p. 2.) In addition, an analysis prepared for the Senate Committee on the Judiciary noted that Senate Bill 515 was ***343 “consistent with the recommendation of the Senate Judiciary Committee analysis last year on [Senate Bill] 1651[,] which urged the sponsors to look at *the content and context* of the statement or conduct when crafting an exemption, rather than enacting a wholesale exclusion of a class of defendants[,] which had been proposed in [Senate Bill] 1651.” (Sen. Com. on Judiciary, Analysis of Sen. Bill No. 515 (2003–2004 Reg. Sess.) as amended May 1, 2003, p. 9, italics added.) Simpson offers no explanation why the Legislature would have been so concerned about the content of the statement or conduct in the first part of section 425.17(c)(1) but would **1129 have abandoned any such concern in the remainder of the sentence.

[12] *30 For these reasons, we interpret section 425.17(c) to exempt from the anti-SLAPP law a cause of action arising from commercial speech when (1) the cause of action is against a person primarily engaged in the business of selling or leasing goods or services; (2) the cause of action arises from a statement or conduct by

that person consisting of representations of fact about that person's or a business competitor's business operations, goods, or services; (3) the statement or conduct was made either for the purpose of obtaining approval for, promoting, or securing sales or leases of, or commercial transactions in, the person's goods or services or in the course of delivering the person's goods or services; and (4) the intended audience for the statement or conduct meets the definition set forth in [section 425.17\(c\)\(2\)](#).

[13] Gore does not dispute that he is in the business of selling legal services, that Simpson's causes of action arise from Gore's advertisement, that the purpose of the advertisement was to promote Gore's legal services, or that the advertisement was addressed to a qualifying audience under [section 425.17, subdivision \(c\)\(2\)](#). The point of contention concerns whether the causes of action “aris[e] from ... representations of fact about [Gore's] ... business operations, goods, or services.” (§ 425.17(c)(1).) We find that they do not.

Simpson's complaint asserts claims for defamation, trade libel, false advertising, and unfair business practices. The common theme among these causes of action is the allegation that the advertisement “communicates that Simpson's galvanized screws are defective.” The complaint alleges in particular that the advertisement “is libelous on its face in that it falsely communicates to the reader that Simpson's products are defective”; that the advertisement “disparaged Simpson's goods in that the Advertisement falsely communicates to the reader that Simpson's galvanized screws are defective”; that these assertions in the advertisement “are false and misleading”; and that using “the false and misleading Advertisement to recruit potential plaintiffs to participate in an unjustified class action lawsuit against Simpson” was an unfair business practice.

We will assume *arguendo* that the advertisement implies that Simpson's galvanized screws are defective. As the Court of Appeal recognized, however, even an implication that Simpson's screws are defective “is not ‘about’ Gore's or a competitor's ‘business operations, goods, or services....’” (§ 425.17(c)(1).) It is, rather, a statement ‘about’ *Simpson*—or, more precisely, Simpson's products.” It therefore falls squarely outside [section 425.17\(c\)](#)'s exemption for commercial speech.

Simpson contends that the advertisement does nonetheless satisfy the commercial speech exemption in that it “expressly states that ‘an attorney’ will ‘investigate whether you have a potential claim’” and that it also *31 supports the inference “that Gore has investigated the named companies and has discovered that they are selling ***344 defective screws.” Both of these statements are “about” Gore's business operations, but neither satisfies the elements of the commercial speech exemption to the anti-SLAPP law.

[14] Simpson's causes of action plainly do not “arise from” (§ 425.17(c)) the representation that an attorney will investigate “whether you have a potential claim.” Simpson's complaint does not allege that this statement is false or even that it is defamatory. In addition, a promise of what an attorney will do if the reader were to respond to the advertisement “is not a representation of fact, but an agreement to take certain actions in the future.” (*Navarro v. IHOP Properties, Inc.* (2005) 134 Cal.App.4th 834, 841, 36 Cal.Rptr.3d 385.) Consequently, it does not constitute “representations of fact about that person's ... business operations, goods, or services.” (§ 425.17(c)(1).)

The alleged inference that Gore has investigated Simpson and discovered that the galvanized screws are defective is not obvious from the advertisement itself, which asserts only that users of these fasteners “may” have certain (but unspecified) legal rights and that an attorney would need to “investigate whether you have a potential claim.” Even if **1130 one were to draw this inference, however, it would be no more than an attempt to layer the allegedly defamatory inference itself—i.e., that Simpson's galvanized screws are defective—with an alleged inference that Gore had *discovered* the defect. Simpson cites no authority for expanding the scope of the commercial speech exemption in this manner. (Cf. *Stewart v. Rolling Stone LLC* (2010) 181 Cal.App.4th 664, 676, 105 Cal.Rptr.3d 98 [the commercial speech exemption did not apply to a claim that the defendant magazine wrongfully used plaintiffs' names for a Camel advertisement; “as plaintiffs concede, the goods they sell are copies of Rolling Stone magazine, not Camel cigarettes. More significantly, the statement or conduct at issue here did not consist of ‘representations of fact about the business operations, goods, or services’ of Rolling Stone or of any of defendants' business competitors. Instead, the representation at the center of this lawsuit is the representation that plaintiffs and their fellow musicians

endorse the sale and use of Camel cigarettes”]; accord, *New.Net v. Lavasoft* (C.D.Cal.2004) 356 F.Supp.2d 1090, 1104 [the commercial speech exemption did not apply because “the purportedly offending statements are not statements made about Defendant's product, but rather statements about Plaintiff and its products” and the two were not competitors]; see also *Troy Group, Inc. v. Tilson* (C.D.Cal.2005) 364 F.Supp.2d 1149, 1151, 1155 [defendant investment adviser's e-mail asking whether plaintiff corporation is one of “the biggest crooks on the planet or what?” is “clearly not about [defendant]'s business, rather it is about [plaintiff], which, as [plaintiffs] admit, is not a business competitor of [defendant]”). We are reluctant to allow plaintiffs to evade the limitations of the statutory *32 text by mere wordplay, especially given our obligation to construe the commercial speech exemption narrowly.

Moreover, Simpson has not attempted to recover damages here because of any implied representation that Gore allegedly *discovered* that Simpson's products were defective, but because Gore allegedly *implied* that they were defective. Whether the Simpson products are in fact defective is beyond the scope of this proceeding, but the inference that they are defective is not a representation of fact about *Gore's* business operations, goods, or services. The Court of Appeal stated the issue succinctly: “To the extent that Gore's advertisement ‘consists of’ representations about his services, Simpson's action does not ‘aris[e] ***345 from’ it; to the extent that Simpson's action ‘aris[es] from’ a representation by Gore, the representation was not ‘about’ Gore's or a competitor's services or business operations.”⁴

Simpson argues next that the commercial speech exemption from dismissal under the anti-SLAPP statute should not require that the statement itself giving rise to the cause of action include factual representations about the defendant's or a business competitor's business operations, goods, or services, as long as the statement giving rise to the cause of action is *accompanied* by factual representations about the defendant's or a business competitor's business operations, goods, or services. The statute's plain language, however, is otherwise. The commercial speech exemption applies only to a cause of action “arising from” a statement (or conduct) that “consists of representations of fact about that person's or a business competitor's business operations, goods, or services....” (§ 425.17(c)(1).)

Simpson complains, with rhetorical flourish, that the advertisement “defam[es] Simpson in order to tout Gore and his services.... The tout and the defamation were of an inseparable whole, with the defamation serving as bait for the tout. The Court of Appeal's approach is as if to parse cheese from a mousetrap.” But this is merely another way of saying that the speaker made a representation of fact about a *noncompetitor's* goods for the purpose of promoting the speaker's own services. Had the Legislature intended the commercial speech exemption to encompass representations of fact about *any* **1131 business operations, goods, or services made for the purpose of promoting sales, leases, or transactions in the speaker's own goods or services, then it would not have limited the exemption to statements or conduct consisting of “representations of fact about *that person's or a business competitor's* business operations, goods, or services” (§ 425.17(c)(1); see *Mendoza v. *33 ADP Screening and Selection Services, Inc.* (2010) 182 Cal.App.4th 1644, 1652, 107 Cal.Rptr.3d 294 [“the Legislature appears to have enacted section 425.17, subdivision (c), for the purpose of exempting from the reach of the anti-SLAPP statute cases involving comparative advertising by businesses.”].)

[15] [16] The legislative history accords with the statute's plain language. As stated earlier, committee reports summarized the bill as “[p]rohibit[ing] the anti-SLAPP motion from being used in specified causes of action against businesses sued for statements or conduct *consisting of* representations of fact about their goods, services or business operations, or those of a competitor, *when those statements ...* were for the purpose of obtaining approval for, promoting, or securing sales or leases of the person's goods or services, or in the course of delivering the person's goods or services....” (Assem. Com. on Judiciary, Analysis of Sen. Bill No. 515 (2003–2004 Reg. Sess.) as amended June 27, 2003, p. 3, italics added.) The plain language and the legislative history each confirm that the statement or conduct giving rise to the cause of action must consist of factual representations about the speaker's (or a competitor's) goods, services, or business operations. Nothing in the plain language or the legislative history suggests it would be enough to protect against dismissal under the anti-SLAPP statute if the factual representations about the speaker's or a competitor's business simply appeared in the ***346 same publication as the statements actually giving rise to the cause of action.⁵

Indeed, Simpson's proposed construction would seriously undermine the anti-SLAPP statute itself. As Gore points out, a press release critical of a political candidate—i.e., core political speech—would lose the protection of the anti-SLAPP statute if the press release *also* mentioned the products sold by the business. We therefore reject Simpson's expansive construction of the commercial speech exemption and conclude, in accordance with the trial court and the Court of Appeal, that Simpson's complaint was not exempted from the anti-SLAPP statute by [section 425.17\(c\)\(1\)](#).

The trial court went on to consider Gore's special motion to strike the complaint under [section 425.16](#), determined that Simpson had failed to establish a probability of prevailing on the merits, and granted the special motion to strike. The Court of Appeal affirmed. The correctness of those rulings is beyond the scope of our grant of

review, which was limited to the [*34](#) applicability of the commercial speech exemption to the anti-SLAPP statute set forth in [section 425.17\(c\)\(1\)](#).

DISPOSITION

The judgment of the Court of Appeal is affirmed.

WE CONCUR: [GEORGE](#), C.J., [KENNARD](#), [WERDEGAR](#), [CHIN](#), [MORENO](#), and [CORRIGAN](#), JJ.

All Citations

49 Cal.4th 12, 230 P.3d 1117, 109 Cal.Rptr.3d 329, 38 Media L. Rep. 1737, 10 Cal. Daily Op. Serv. 5946, 2010 Daily Journal D.A.R. 7087

Footnotes

- 1 SLAPP is an acronym for “strategic lawsuit against public participation.” ([Jarrow Formulas, Inc. v. LaMarche \(2003\) 31 Cal.4th 728, 732, fn. 1, 3 Cal.Rptr.3d 636, 74 P.3d 737.](#)) All further statutory references are to the Code of Civil Procedure unless otherwise indicated.
- 2 See [Leoni v. State Bar \(1985\) 39 Cal.3d 609, 624, 217 Cal.Rptr. 423, 704 P.2d 183](#) (lawyer advertising is protected by the First Amendment).
- 3 As Simpson points out, [Brill](#) did place the burden on the defendant. But [Brill](#) analyzed only whether the applicability of the commercial speech exception was part of [Equilon's](#) first step, where the court decides whether the defendant has made a threshold showing the challenged cause of action arises from protected activity, or part of [Equilon's](#) second step, where the court determines whether the plaintiff has demonstrated a probability of prevailing on the claim. ([Brill, supra, 132 Cal.App.4th at pp. 329–331, 33 Cal.Rptr.3d 371.](#)) [Brill's](#) conclusion that the defendant had the burden of proof to establish the nonapplicability of the commercial speech exception was based solely on its classification of the issue as a first-step determination and did not at all consider [section 425.17's](#) status as an exception to [section 425.16](#) or any canons of construction. ([Brill, supra, at p. 331, 33 Cal.Rptr.3d 371.](#)) [Brill Media Co., LLC v. TCW Group, Inc., supra, 132 Cal.App.4th 324, 33 Cal.Rptr.3d 371](#), is therefore disapproved to the extent it is inconsistent with our holding here.
- 4 One can conceive of a cause of action arising from a representation of fact about the attorney's own services—such as a false claim that the attorney had already recovered a judgment against the manufacturer for the defective product—but the advertisement in this case did not contain such a representation.
- 5 Simpson complains that a party should not be able to defeat the commercial speech exception to the anti-SLAPP statute by parsing a two-sentence advertisement into its component parts. We agree. The proper test does not turn on the punctuation used in the advertisement, but on the basis for the cause of action. Here, the causes of action all arise from the inference that Simpson's products are defective, an inference that Simpson alleges is implied from the text of the advertisement. This inference, though, contains no representations of fact about [Gore's](#) business operations, goods, or services.

34 Cal.App. 660, 168 P. 595

WILLIAM D. STEPHENS, Governor
of the State of California, Petitioner,

v.

JOHN S. CHAMBERS, State
Controller, Respondent.

Civ. No. 1757.

Court of Appeal, Third District, California.
September 17, 1917.

CONSTITUTIONAL LAW--APPROPRIATION OF
PUBLIC MONEY FOR PEACE JUBILEE AT
VICKSBURG--VALID LEGISLATIVE
ENACTMENT--GIFT PROVISION NOT VIOLATED.

The act of the legislature which became effective July 31, 1917 (Stats. 1917, p. 1608), appropriating the sum of fifteen thousand dollars, to be expended by the Governor, in his discretion, for the purpose of assisting to defray the expenses of a public nature incident to the holding of the national memorial reunion and peace jubilee at Vicksburg, Mississippi, in October, 1917, is a valid enactment, and is not within the inhibition of section 31 of article IV of the Constitution, prohibiting any gift of public money to any individual or corporation, and interdicting the appropriation of public money for the purpose or benefit of any corporation or institution not under the exclusive management and control of the state as a state institution.

ID.--REQUIREMENTS OF BILL APPROPRIATING
PUBLIC MONEY--CONSTITUTIONAL PROVISION
NOT CONTRAVENED.

The act of the legislature which became effective July 31, 1917, appropriating public money for the purpose of assisting to defray the expenses of a public nature incident to the national memorial and peace jubilee at Vicksburg, Mississippi, in October, 1917, is not inconsistent with section 34 of article IV of the Constitution, declaring that no bill making an appropriation of money, except the general appropriation bill shall contain more than one item of appropriation, and that for a single and certain purpose to be expressed therein, because of the indefiniteness of the language of the act.

ID.--EXPENDITURE OF MONEY--DISCRETION
OF GOVERNOR--VALIDITY NOT AFFECTED.

The act of the legislature which went into effect July 31, 1917, appropriating public money for the national peace jubilee celebration at Vicksburg, Mississippi, in October, 1917, is not void because it vests the Governor with discretion in the expenditure of the money appropriated.

APPLICATION for a Writ of Mandamus originally made to the District Court of Appeal for the Third Appellate District.

The facts are stated in the opinion of the court.

*661 L. T. Hatfield, for Petitioner.

U. S. Webb, Attorney-General, and Robert W. Harrison, Deputy Attorney-General, for Respondent.

HART, J.

This is an application for a writ of mandate requiring respondent, as state controller, to draw his warrant in favor of petitioner "for such portion of the sum of fifteen thousand dollars, as petitioner may require."

At the recent session of the legislature there was regularly passed an act entitled "An act to provide for the celebration of the national memorial reunion and peace jubilee at Vicksburg, Mississippi, and making an appropriation therefor," which act was by the Governor approved and took effect July 31, 1917 (Stats. 1917, p. 1608). Section 1 thereof reads, in part, as follows: "There is hereby appropriated ... the sum of fifteen thousand dollars, to be expended by the Governor, in his discretion, for the purpose of assisting to defray the expenses of a public nature incident to the holding of the national memorial reunion and peace jubilee to commemorate the victories and virtues leading to the half century of peace and prosperity to the American nation, and further to strengthen the fraternal ties of amity in the United States," said reunion to be held at Vicksburg in October, 1917, on certain named days.

Section 2 provides that the Governor shall "demand from the state controller, and the state controller is hereby authorized and instructed upon such demand, to draw his warrant in favor of the Governor for the sum of fifteen thousand dollars to be expended by him as above provided, and the treasurer is hereby authorized and directed to pay the same."

By way of answer and return to the petition for a writ of mandate, respondent alleges that said petition "does not state facts sufficient to entitle the petitioner to the relief prayed for," and it is contended that the attempted appropriation of money is contrary to the provisions of section 34, article IV, of the Constitution, which reads: "No bill making an appropriation of money, except the general appropriation bill, shall contain more than one item of appropriation, and that for one single and certain purpose, to be therein expressed."

Thus it will be observed that, so far as the pleadings in this proceeding are concerned, the legality of the statute or appropriation *662 in question is attacked upon one ground only. Indeed, in his brief, the attorney-general appears to concede that it is within the constitutional competence of the legislature of this state to appropriate money from the funds of the state for the purpose and object for which the appropriation is made by the act under attack here, for he says: "In the determination of the validity of this appropriation, it is not necessary to question the objects and purposes of the reunion to be held at Vicksburg. It may well be admitted that such reunion tends to do all of the things expressed in the act as the reasons for holding such reunion. Nor do we here contend that the holding of such reunion is not a matter of state and national importance and one which it might well be to the state's advantage to encourage, even to the extent of appropriations of money to defray the expenses incident thereto." In thus expressing himself, the attorney-general doubtless took into consideration, as properly he should, the act of the Sixty-fourth Congress of the United States (Session of 1915-16)--Act Cong. Sept. 8, 1916, c. 464, 39 Stat. 812--whereby money was appropriated for defraying the expenses of the "National Memorial Celebration and Peace Jubilee at Vicksburg, in the year 1917, by the survivors of the armies of the Tennessee and of the Mississippi," who participated in the memorable battle of Vicksburg in the month of July, 1863, for the reason that the appropriation involved in the act whose validity is here challenged is in aid of the purposes and objects of said act of the national Congress. With this concession of the attorney-general that there legally reside in the state the power and the right to appropriate a reasonable amount of the public moneys to aid in the achievement of the purposes of the act of Congress referred to, further consideration herein thereof might well be waived or dismissed, but, in view of the strictness with which the Constitution, by certain provisions therein

contained, guards the disposal of the public revenues, and of certain cases expounding those provisions, some observations with respect to that proposition need not be deemed out of place herein.

From what has already been said, it is doubtless plain enough that we are in full accord with the concession of the attorney-general that the legislature may, without offending any of the inhibitory mandates of the Constitution with regard to the appropriations of the public moneys, make such *663 an appropriation as the one whose legality is challenged in this proceeding; and so we express ourselves because of the conviction that, while the legislature will not be permitted to go beyond the bounds expressly established by the people through their Constitution in the matter of the disposal of the revenues raised for the support of the state government. it would be opposed to and, indeed, conceivably in many instances, subversive of the highest ends and the best interests of, a government whose sovereignty and general policies are outlined and controlled by a written constitution, framed in language necessarily general, if it were found requisite, in constitutional construction, to hold that the terms of the organic law should on all occasions be accepted and applied in their literal sense, or that there are not certain matters incidental and necessary to every well-governed state and its subjects as to which the Constitution is silent, in so far as express language is concerned, and as to which legislation looking to the highest welfare of the governed is absolutely necessary. A written constitution, like a statute, cannot so deal with particulars as to meet or provide for every case or contingency which may arise and of which legislative cognizance is allowable if necessary to the complete enjoyment of those privileges, immunities, and rights which are of the essence, and, indeed, the primary and foremost objects of a government in which, like ours, ultimate sovereignty is in the people themselves. By this we do not mean to say that the limitations or barriers contained in the Constitution against the exercise of legislative power may be set aside or disregarded, or that the intent of the organic law, as it is to be gathered from the instrument itself, shall not in all cases prevail. Nor do we intend thus to imply that the courts, in the construction of a written constitution, may be governed by a change in public sentiment as to any subject to which express attention is given and as to which limitations are fixed by the Constitution. But what we do maintain is that, since a written constitution is intended as and is the mere framework according to whose

general outlines specific legislation must be framed and modeled, and is therefore, as stated and as is essentially true, necessarily couched in general terms or language, it is not to be interpreted according to narrow or super-technical principles, but liberally and on broad general lines, so that it may accomplish in full measure *664 the objects of its establishment and so carry out the great principles of government.

The Constitution of the United States involves a grant and limitation of powers. The federal government, through its Congress, can exercise or exert no power which is not clearly within the grant of the federal Constitution; and this means that Congress may exercise only the powers expressly conferred upon the federal government and such incidental or auxiliary powers as may be essential to the exercise and execution of the powers expressly granted. There is no provision in the national Constitution expressly authorizing the expenditure of public moneys for the purposes and objects stated in the act of Congress above referred to. Nor is there any single provision of that Constitution within the spirit or reason of which does authority for such an appropriation of the public moneys fall. The same is true as to the several acts of Congress pensioning soldiers who fought to uphold the Union in our domestic Civil War. But the latter acts, as well as the one giving rise to the appropriation herein attacked, have never been challenged upon the ground that they were *ultra vires*, or beyond the authority of Congress to enact. Perhaps, by applying to them the touchstone of strict technical principles of construction, their force as legal enactments might be destroyed. But no such view or method of construction as applied to those acts would by any court be accepted or resorted to. To the contrary, in comparing them with the Constitution, if, indeed, the solution of the question whether they are or are not valid involves a matter of constitutional construction, the courts, if discovering even no indirect or inferential authority for their enactment in the language of that instrument, would nevertheless find ample sanction for them in the general spirit of our national government and in the genius of our political institutions, as outlined and promulgated by the Constitution itself and so sustain them as treating with subjects which clearly fall, not within the letter of the organic law, but within the spirit and reason of those general policies which inhere, and of necessity must inhere, in every government framed and formed upon the lines of enlightened general principles--policies consistent and in harmony with the nature and

form of the government as outlined by the primary law of the land and the absence of which would greatly and seriously curtail or *665 restrict that full enjoyment of the rights of persons and of property which can only come from a government deriving its force from the consent of the governed. It would, indeed, come as a shock if the courts felt compelled to declare and so hold that laws pensioning those who fought to preserve the integrity of the American Union and who, from their accumulated years or disease, are unable to care for themselves, were beyond the power of Congress to enact. Such a judicial fiat would be universally denounced as repugnant to every consideration of governmental duty, obligation, and gratitude. But the motive underlying such legislation is much broader and more far-reaching in its effect upon the government of society than the mere consideration of gratitude. Undeniably, the stability of every civilized government and its political institutions wholly depends upon the patriotism and loyalty thereto of its subjects; hence it is the first duty of every government so to administer its affairs as to inspire in its citizens patriotism and loyalty to the fundamental political principles upon which it is founded, and, to that end, through appropriate policies, teach and exemplify the duty which every citizen owes to his country and its government. Therefore, as stated, legislation which provides for the pensioning of those who have fought the battles of their country for the preservation of its governments and who are in need of assistance involves not only the quality of gratitude, but a just and substantial recognition of services inspired by patriotism, without which battles cannot, as a rule, successfully be fought. If it may be said as to the present crisis with which our country is confronted that patriotism in our citizens has not been aroused, how infinitely worse would the conditions in that regard now be if, in the past, our government had wholly failed in a proper way to recognize and reward, in proper cases, those who had gone to the front and fought our battles in the past?

As we understand the congressional act in aid of the purposes and objects of which the appropriation challenged here was made by our own legislature, the great object and desideratum thereof is to bring about a sentiment of amity between those sections of our country who opposed each other in one of the most bitterly fought domestic wars of which history gives any record; for it is a matter of common historical knowledge that the bitterness of sentiment brought *666 about between the northern and southern sections by that war existed in

full vigor down to the opening of hostilities between this country and Spain, which ended with the late Spanish-American war. And there can hardly be any doubt that that same old feeling in some degree still lingers or exists. The governments of the Union and of the states could adopt no more effective policy for reuniting the two sections in one common political sentiment than that which is involved in and represented by the legislation in question. That the inevitable effect of such a gathering, annually held, as seems to be the policy of Congress, so long as there is a considerable number of the survivors of both sides of that war, will be ultimately to destroy every vestige of that old feeling of antagonism in political sentiment (we here use the word "political" in its more comprehensive sense), there cannot be the shadow of a doubt; and that the inevitable consequence of a condition so brought about will be to establish throughout the whole country a deeper, more abiding and a universal love for our common country and its government, is equally plain. Congress could have exercised no power or established no other policy more conducive to the general welfare of our government and the people, for no government can long exist with its people radically divided in sentiment upon the fundamental political doctrines upon which it is founded.

If, then, Congress, circumscribed as it is within the narrow bounds of granted and limited powers, may rightfully, in the absence of express authority therefor, but solely by the exertion of that power which must inhere in every government if the general welfare is on all occasions and in every emergency to be subserved as intended by the very nature and spirit of our form of government, appropriate moneys from the public revenues for the purpose of accomplishing the great ultimate object of the act in question, why may not a state, essentially a constituent part of the Union--which, indeed, goes to the making of the Union--make a like appropriation as in aid of the object thus to be achieved?

While the governments of the Union and the states are independent of each other, operate within distinctly different spheres, and are designed for the accomplishment of different specific objects, yet, upon general political or governmental policies their interests are common, and what in a political sense stands for the general welfare of the Union necessarily *667 stands for the general welfare of the states. Unquestionably, the states, as separate entities and as component parts of

the Union, are each equally with the Union interested in the crystallization and execution of any policy of the federal Union that will tend to perpetuate the permanency of the latter, for largely if not wholly upon the perpetuity of the Union depends the permanency of the states as governmental organizations. It follows, therefore, that the policy of the general government with respect to the subject matter of the act of Congress above mentioned is necessarily the policy of each of the states, and that within the latter, no less than within the federal government, resides the power of effectuating and applying that policy. In other words, the duty, if it be a duty, of contributing to the carrying out or execution of that policy rests no less upon the states than upon the federal government. And the right of the states to do so does not depend upon any authority vested in them by express language in their constitutions, nor is it to be controlled by the restrictions or limitations upon the legislative power contained in those instruments, but, as in the case of the federal government, arises from that inherent, dormant power which may legally be aroused to action, exerted and applied by all democratic governments, controlled by written constitutions, whenever the exigencies of government imperatively require its exertion and exercise--that power which, in a general sense, is analogous to the general war powers of the federal government, under which, as war measures, the latter may, as it is now doing, properly control trade principles and execute an infinite variety of other acts which, under normal conditions, approach if not in truth involve paternalism in government or unwarranted abridgments of individual rights as assured and guaranteed by the Constitution.

Thus, it is clear, the inhibitions of our state Constitution against any gift of public money to any individual, municipal or other corporation (article IV, section 31), and interdicting the appropriation of public money "for the purpose or benefit of any corporation, association, ... or other institution not under the exclusive management and control of the state as a state institution" (Const., art. IV, sec. 22) have no application to this case. Indeed, it has been so held in a decision treating a proposition quite analogous in principle to that submitted for solution here. (*668 *Daggett v. Colgan*, 92 Cal. 53, [27 Am. St. Rep. 95, 14 L. R. A. 474, 28 Pac. 51].) That case involves an interesting and instructive discussion of the propositions to which we have hereinabove given considerable attention, and we may, therefore,

pardonably and with advantage, reproduce herein an extended excerpt from the learned opinion therein. It should first be explained that the legislature of 1891 (Stats. 1891, p. 24) passed an act appropriating a large sum of money to be paid to the California Commission of the World's Fair Columbian Exposition, held in the city of Chicago, and to be used by said commission in the construction of buildings at said fair in which to maintain an exhibit of the industrial products of this state and to defray the expenses arising in connection with such exhibit. The state controller, claiming that the appropriation made by the act was in direct contravention of that part of section 22, article IV, of the Constitution above quoted herein, declined to draw his warrant in favor of said commissioners on the fund so appropriated. After discussing that proposition adversely to the position of the controller, the court, in its opinion, made these significant observations:

“The defendant further contends that the statute is unconstitutional for the reason that the appropriation thereby made is not for a public use, such as the state is authorized to make; that the maintenance of an exhibition of the products of the state in the manner contemplated does not fall within the legitimate authority of the state government.

“In passing upon this proposition, it is necessary to bear in mind that what is for the public good, and what are public purposes, ‘are questions which the legislature must decide upon its own judgment, in respect to which it is vested with a large discretion which cannot be controlled by the courts, except, perhaps, where its action is clearly *evasive*.... Where the power which is exercised is legislative in its character, the courts can enforce *only* those limitations which the Constitution imposes; not those implied restrictions which, resting in theory only, the people have been satisfied to leave to the judgment, patriotism, and sense of justice of their representatives.’ (Cooley's Constitutional Limitations, 154.)

“It is undoubtedly true that public money can be rightfully expended only for public purposes, but as well said by that eminent jurist, Judge Cooley, in delivering the opinion of the court in *669 *People v. Salem*, 20 Mich. 452, [4 Am. Rep. 400]: ‘*Necessity* alone is not the test by which the limits of state authority in this direction are to be defined, but a wise statesmanship must look

beyond the expenditures which are absolutely needful to the continued existence of organized government, and embrace others which may tend to make that government *subserve the general well-being of society*, and advance the present and *prospective happiness and prosperity of the people.*’

“In view of these principles of constitutional law, which are so well settled as to be placed beyond discussion or dispute, it is manifest, we think, that the court is not authorized to declare the act under consideration void, upon the theory that the expenditure thereby authorized can in no manner be considered as tending to promote the public welfare, which it is one great object of government to secure. The question whether the public interests of the state would be at all advanced by an exhibition of its products such as is contemplated by the act was an appropriate one for discussion in the halls of the legislature before its enactment, and for the consideration of the Governor before approving it, but it is not one for this court to decide, upon the individual views of its members concerning the wisdom or expediency of such legislation.

“There is no difference, except in degree, between the appropriation contained in this act and those which for years have been made without any question as to their validity, for the support of the state agricultural fair, and the various district agricultural societies throughout the state. The fact that this exhibit of the products of the state is to be made without the limits of the state does not change its essential character, or make it any less an occasion or purpose in which, in an enlarged sense, it may be said that the people of the state have an interest. So, also, it would be hard to distinguish this appropriation in principle from those appropriations which have been made from time to time for the maintenance of horticultural, viticultural, and other similar commissions. None of these, strictly speaking, are required for the proper administration of the government of the state, and possibly, in the opinion of many, call for an unjustifiable and useless expenditure of money. But the power of the legislature to create such commissions has never been doubted.

*670 “We know from the express declaration of the act of Congress authorizing the Columbian Exposition that the purpose of the exposition is to commemorate the four hundredth anniversary of the discovery of America,

‘by an exhibition of the resources of the United States of America, their development, and of the progress of civilization in the New World’; and that such exhibition is to be of a ‘national and international character, so that not only the people of the Union and of this continent, but those of all nations, as well, can participate.’

“We have no doubt that it was fairly a matter within the power of the legislature to determine whether, as a matter of public policy and as tending to advance the best interests of its citizens, this state should join with its sister states, and with the government of the United States, in celebrating in the way suggested the historical event referred to.

“It has been held in many cases that a municipal corporation has no authority, under the general powers usually given such corporations, to appropriate money for the celebration of the anniversary of important events in the history of our country, such as the Fourth of July (*Hodges v. Buffalo*, 2 Denio (N. Y.), 110; *Hood v. Lynn*, 1 Allen (Mass.), 103) and the surrender of Cornwallis. (*Tash v. Adams*, 10 Cush. (Mass.) 252. See, also, *The Liberty Bell*, 23 Fed. 844.)

“These decisions, however, all rest upon the principle that municipal corporations have no powers except such as are specifically granted by the act of incorporation, or are necessary for the purpose of carrying into effect the powers expressly granted. *But it has never been doubted that the state could confer upon a city or town the authority to celebrate such important events in the history of the country as appeal to the patriotism or higher sentiments of the people, and to tax their citizens to pay the expense thereof.* Thus it was held that the city of Philadelphia had the power under its charter to provide for the entertainment of distinguished visitors upon the occasion of the celebration of the Centennial Anniversary of American Independence. (*Tatham v. Philadelphia*, 11 Phila. (Pa.) 276.) So, also, in Massachusetts, by general statutes, the power has been conferred upon towns to celebrate the centennial anniversary of their incorporation (*Hill v. East Hampton*, 140 Mass. 381, [4 N. E. 811]), and also to appropriate money for the celebration of holidays, and for *671 other public purposes. (*Hubbard v. Taunton*, 140 Mass. 467, [5 N. E. 157].)

“These cases are authority for the proposition that the state itself, unless restrained by its Constitution, has the

power to make appropriations for such purposes, because unless it possesses the power, it could not confer it upon its municipal corporations. Such expenditures are justified under the general power which the state has to provide for the public welfare--the limits of which are perhaps not capable of exact definition--*and are the same in principle as appropriations made for the building of monuments to commemorate great historical events, or for the erection in public places of the statues of those who by common consent are classed among the patriots or benefactors of the nation.*

“Undoubtedly this power may be the subject of great abuse, but this is no argument against its existence. The only protection against reckless and improvident appropriations for public purposes must be found in the character of those intrusted with the power of legislation, and in the integrity and firmness of the chief executive of the state.”

Obviously, there is a distinction between the act questioned in the Daggett case and the act involved in this proceeding with respect to the specific objects of the respective appropriations of the public money. Both, however, aim at the accomplishment of the same general object, viz., the promotion of the general public welfare. For, so far as the promotion of the public welfare is concerned, no distinction in importance or effect between the two acts can logically be pointed out. The exploitation of the industrial resources of a state is surely a matter which directly affects and, where such resources are in magnitude such as to demonstrate the natural material wealth and prosperity of the state, promotes the public welfare. No less may be said of public acts looking to the promotion and fostering in the citizens of a state or nation sentiments of patriotism, which, as we have shown, and as is most obviously true, constitutes the essential mainspring of every stable government. What, indeed, would industrial prosperity count for in a country whose government was without the support of the patriotism and loyalty of its subjects? The past political history of Russia, at this writing in the throes of bitter political disturbances and turbulences, may well stand as an answer to the question.

*672 As stated in the opinion in the Daggett case, *supra*, the question whether the public interests of the state as well as of the nation of which the former is an essential part will be advanced by the meeting in reunion at Vicksburg of the survivors of both sides of the Civil War that fought

at the battle known in history by the name of that city was an appropriate one for discussion in the halls of the legislature before the appropriation was made by a legislative act, and for the consideration of the executive before approving it. We must assume that the legislature and the Governor had before them facts and data upon which they were enabled to predicate their judgment that the state and the Union would be materially benefited by the reunion and thus the public welfare and general well-being of society subserved. Their conclusion regarding the act cannot, therefore, be impeached by the courts.

There is no language or provision in the statute appropriating the money indicating that any individual will or can, if the appropriation be properly expended, or dispensed according to the face of the act, receive a single cent as a gratuity or by way of assistance, but that the money appropriated shall be expended in such manner as the executive shall determine will the better and the more effectively effectuate the specific objects of the appropriation and the ultimate purpose to be thereby subserved. And herein lies the distinction between the appropriation in question and that considered and properly held invalid by this court in the case of *McClure v. Nye*, 22 Cal. App. 248, [133 Pac. 1145]. The act in that case attempted to appropriate the sum of fifteen thousand dollars, out of the state treasury “for the purpose of paying the transportation of certain veterans of the Civil War to Gettysburg, Pennsylvania, on the occasion of the fiftieth anniversary of the battle fought on that battlefield.” Obviously, upon the very face of that provision the appropriation amounted to nothing less than a gift of public moneys, and hence flew squarely in the face of the provision of our Constitution against thus disposing of our public revenues. In the present case, as seen, the appropriation is to be used on the occasion of the reunion at Vicksburg for the purpose of effectuating the great, central object of the gathering, as pointed out by the act of Congress and the act here in question, viz., to strengthen the fraternal ties of amity in the United States.

*673 As shown, no express provision is made by the act for the payment of the transportation of veterans or other persons to Vicksburg, though we doubt not that if, in furtherance of the paramount and ultimate object of the reunion, it be necessary to apply some of the money in sending representatives from California to the reunion or convention, such expenditure would come within the legitimate purposes of the appropriation and the right of the state to bear.

We are now brought to the consideration of the principal point upon which the attorney-general relies to impeach the constitutional validity of the appropriation, viz.: That the act making the appropriation is inconsistent with the provisions of section 34 of article IV of the Constitution, which is above reproduced in full herein. The gravamen of the attorney-general's argument in support of this position is that the language of the act is so uncertain and indefinite that it cannot be determined therefrom whether the appropriation thereby provided for is or is not for a public purpose. This argument, no doubt, comes from the language of the act, “for the purpose of assisting to defray the expenses of a *public nature*,” etc. It may be conceded that this language is so general as to be ambiguous as to the specific purpose of the appropriation, and if the act contained no further amplification of the purpose for which the appropriation is designed than may be implied from those words-- that is, that the appropriation was for some unexpressed or undiscovered purpose--it might be necessary to hold that the position of the attorney-general is well taken. But the language referred to is immediately followed by other language which clearly and with certainty expresses the specific purpose of the appropriation--a purpose which the legislature has found refers to the general welfare of the state and, therefore, the expenses necessary for its execution a burden which may properly be borne by the state.

There is no ground to support the argument that the appropriation is not for a “single” purpose within the meaning of that word as it is employed in the section of the Constitution mentioned. The sole and only purpose of the appropriation, as is clearly deducible from the language of the act, is to assist in defraying the expenses of a convention of persons who are so to meet in reunion to effectuate a purpose by the execution of which, according to the tenor of the act here in *674 question and the act of Congress above referred to, the public welfare of the state will be subserved.

Nor is there any legal reason which will uphold the objection that the act is invalid because it vests in the Governor discretion as to the expenditure of the money appropriated. This provision was doubtless inserted in the act for the purpose of committing to the judgment of the executive the determination of the manner in which the appropriation may be expended to the best and highest interests of the state. If, for illustration, it becomes

necessary to send representatives from the state to the reunion, it is only proper that the Governor, upon whom the act fixes the responsibility for the expenditure of the money, should be clothed with some discretionary power as to the number of persons so to be sent, and as to the amount of money that should reasonably be expended for defraying the expenses of such representatives to Vicksburg and back and while there during the progress of the convention. This should be true, since the act itself does not undertake to point out specifically how the money shall be used. Of course, the presumption is that the executive will perform his duty under the act faithfully and in furtherance of the objects and purposes intended to be subserved thereby.

Our conclusion is that the appropriation is perfectly valid, and, accordingly, a writ of mandate will issue out of this court commanding and requiring the respondent, state controller, to draw his warrant or warrants on the fund appropriated by the act in favor of the Governor of the state of California, as provided by said act, and, in accordance with the stipulation heretofore filed herein by the attorneys of the respective parties, said writ is ordered to issue forthwith.

Chipman, P. J., and Burnett, J., concurred.

DECLARATION OF SERVICE BY EMAIL

I, the undersigned, declare as follows:

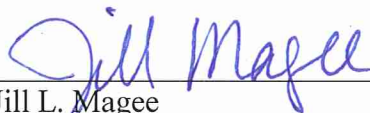
I am a resident of the County of Sacramento and I am over the age of 18 years, and not a party to the within action. My place of employment is 980 Ninth Street, Suite 300, Sacramento, California 95814.

On September 11, 2017, I served the:

- **Notice of Complete Test Claim Filing, Schedule for Comments, Request for Administrative Record, and Notice of Tentative Hearing Date issued September 11, 2017**
- **Test Claim filed by City of Union City on June 30, 2017, cured August 14, 2017**
California Regional Water Quality Control Board, San Francisco Bay Region,
Order No. R2-2015-0049, 16-TC-03
City of Union City, Claimant

by making it available on the Commission's website and providing notice of how to locate it to the email addresses provided on the attached mailing list.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration was executed on September 11, 2017 at Sacramento, California.



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COMMISSION ON STATE MANDATES

Mailing List

Last Updated: 9/8/17

Claim Number: 16-TC-03

Matter: California Regional Water Quality Control Board, San Francisco Bay Region,
Order No. R2-2015-0049

Claimant: City of Union City

TO ALL PARTIES, INTERESTED PARTIES, AND INTERESTED PERSONS:

Each commission mailing list is continuously updated as requests are received to include or remove any party or person on the mailing list. A current mailing list is provided with commission correspondence, and a copy of the current mailing list is available upon request at any time. Except as provided otherwise by commission rule, when a party or interested party files any written material with the commission concerning a claim, it shall simultaneously serve a copy of the written material on the parties and interested parties to the claim identified on the mailing list provided by the commission. (Cal. Code Regs., tit. 2, § 1181.3.)

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